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Non-Marital Fertility Among Mexican American Women: Exploring the Role of Social Context

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Dedication

This dissertation is dedicated to my mother, Leila Jordan, who I love and miss.

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Non-Marital Fertility Among Mexican American Women: Exploring the Role of Social Context

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The fundamental aim of this dissertation is to determine why a large proportion of Mexican American women are more likely to begin their 'pathway' to family life with a birth rather than with marriage. I use the 1995 NSFG and the NSFG-CDF to explore the relationships between background characteristics, social context, and non-marital fertility among Mexican American women testing hypotheses drawn primarily from two bodies of research; one that focuses on the high levels of non-marital fertility among African American women, and one that focuses specifically on 'cultural' characteristics and the unique social experience of Mexican Americans in the United States.

One of the most important findings in this dissertation is that race/ethnic differences in non-marital fertility vary by socioeconomic status, being larger among women of higher SES. The story behind these differences varies as well. Among women of lower SES, higher fertility within cohabiting unions explains much of the

Mexican American/White difference in non-marital fertility. This is not the case for women of higher SES. Analyses using the Fragile Families and Child Wellbeing Study, further exploring the meaning of cohabitation, suggest that cohabitation may serve as a surrogate marriage for women of Mexican origin, though this is less the case for Mexican American relative to Mexican born women. Social context matters too, and, as is the case with Black women, where Mexican American women live is associated with their relatively high non-marital fertility. However, it is the structural characteristics of both the broader (county) and more local (census tracts) contexts that appear to be important. Additionally, while both contexts were important for women of higher SES, only the more localized measures were important for women of lower SES. This suggests that socioeconomic status in part determines the structural opportunities a person has access to. Ultimately, Mexican American non-marital fertility is likely shaped by their Mexican heritage as well as by their minority status which results in a distinct pattern of behavior, one that is unique from both Mexican and mainstream U.S. cultures.

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Chapter 1: Introduction

1.1 Research Problem

While much research has documented the change in the American family over the last few decades, the three changes that emerged as most critical in the 1990's are the increasing prevalence of premarital cohabitation, the decline and the delay in marriage, and the increased separation of marriage from childbearing (Bachrach, Hinding, and Thomson 2000; Bumpass and Lu 2000). All these factors have contributed to the rise in non-marital fertility, or out-of-wedlock childbearing, an issue that has increasingly gained attention in both the academic and public arenas (Wu and Wolfe 2001). How research looks at non-marital fertility has also changed. Historically, research tended to focus on teenagers. This perspective placed the policy emphasis on teenage pregnancy prevention. However, 50% of first non-marital births and 70% of all non-marital births occur to women over the age of 20 (Lundberg 2001; Ventura, Martin, Curtin, and Matthews 1995; Wu, Bumpass, and Musick 2001). As a result, recent research has additionally focused more closely on the family formation behavior of all women, and in particular on the change in marriage and fertility behavior (Lundberg 2001).

While it was once the case that marriage followed by childbearing was considered the appropriate sequencing of life events for women, it is clear that the 'normative' sequencing of events is changing (Musick 2000; Stier and Tienda 1997).

Not only is it the case that childbearing is increasingly occurring outside of marriage, women are also less likely to marry in response to a pregnancy than ever before (Parnell, Swicegood, and Stevens 1994; Bachu 1999). While marriage and childbearing are alternate pathways to family formation, the sequencing of these events is what profoundly impacts women and their children (Stier and Tienda 1997; Driscoll, Hearn, Evans, Moore, Sugland, and Call 1999; Rindfuss, Morgan, and Swicegood 1988). This concern lays the foundation for the fundamental research problem of this dissertation, namely why are some groups of women more likely to begin their 'pathway' through adulthood with a birth rather than with marriage?

The decline in marriage and the resulting rise in non-marital births are particularly pronounced among minority women and women of lower socioeconomic status (Wu and Wolfe 2001). Much research has focused on Black/White differences in the risk of a non-marital birth and on factors associated with these differences, such as the likelihood of marriage or marriage in response to a pregnancy, age at first sex, use of contraceptives, and prevalence and meaning of cohabitation (Brewster 1994b; Manning 1993, Parnell et al. 1994, Wilson 1987, Loomis and Landale 1994). Yet, research focusing on the Black/White dichotomy decreasingly captures the reality of ethnic diversity in the United States. The U.S. has recently experienced a substantial growth in the Hispanic population, which accounted for 12% of the total population in 2000 (Therrien and Ramirez 2001). While many recent studies looking at family behavior have moved beyond the Black/White dichotomy to include Hispanics,

family formation patterns vary substantially for Mexicans, Cubans, Puerto Ricans, and other Hispanics (Bean and Tienda 1987; Lichter and Landale 1995).

The majority (65.2%) of the Hispanic population is comprised of people of Mexican origin, an economically disadvantaged group with poverty rates three times higher than for Whites (Ramirez 2000). There is evidence that Mexican American women have high levels of non-marital fertility, higher than for White women. In 1997, the overall fertility rate for Mexican origin women was 116.6 births per 1,000 women aged 15-44 compared to 55.8 for White women and 71.9 for Black women. While much of this fertility occurs within marriage, a significant portion is non-marital; roughly 39% of all births to Mexican origin women are to unmarried women, compared to 21.5% for White women and 69.4% for Black women (Ventura et al. 1999). This provides an ideal opportunity to explore whether theories linking disadvantage to the high non-marital fertility of Black women apply to Mexican American women, another large minority group.

Research has documented the association between many individual level economic, demographic, life course, and family background variables and non-marital fertility (McLanahan and Sandefur 1994, Wu 1996, Coverdill and Kraft 1996, South 1996). Despite the fact that race/ethnic variation across these factors do 'explain' some of the race/ethnic differences in non-marital fertility, much remains unexplained. Building on the work of Wilson (1987), a large body of research has begun to examine how social context, such as neighborhood opportunities and

environment, affects the family formation of men and women. Research has suggested that communities with limited educational and employment opportunities may result in a dearth of "marriageable men" or may deny young women normative transitions to adulthood by delaying marriage and employment, thereby accelerating non-marital fertility. Additionally, as a result of living in these socioeconomically disadvantaged communities, individuals may experience "social isolation" from the mainstream, which results in a weakening of norms against mainstream behavior, including having a child out-of-wedlock. Few studies have looked at non-marital fertility among Mexican American women and no study that I am aware of has looked at the link between community context and non-marital fertility as a reason for continued differences between Mexican American and White women. This is particularly interesting as Mexican American women are more likely than White women to live in disadvantaged communities.

The study of Mexican American women also allows one to explore whether a distinct ethnic heritage and/or ethnic experience independently shapes their family formation. Most research looking at Black/White differences in family formation argues that any normative differences that exist between the groups arise in response to socioeconomic discrepancies and are not due to internalized individual traits. This is not the case for research on the Mexican American population which often emphasizes normative differences resulting from a more *familistic* cultural orientation, one that stresses a strong orientation to marriage, motherhood, and

fidelity and discourages overt sexuality for women (Del Castillo 1984, Vega 1990; Erickson 1998). Seldom measured in quantitative research, 'culture' is often assigned as the explanation for any residual race/ethnic differences that remain once other measurable factors have been accounted for in regression models. While assimilation theory suggests that an individual's familistic orientation may weaken with time in the U.S. or across generations, 'culture' may have a broader level of influence. For example, communities with large Hispanic or immigrant populations may foster a stronger sense of ethnic identity or attachment among Mexican American women than more integrated communities.

Developing a more complete understanding of the race/ethnic differentials in non-marital fertility is important because the large majority of children born to an unmarried mother spend at least some time in a household with only one biological parent and the negative effects of single parenthood on children are well documented (Wu and Wolfe 2001). The children of these families are more likely to be poor, to drop out of high school, to have a teenage birth, and suffer from developmental delays (McLanahan and Sandefur 1994). Women who have non-marital births have more disadvantaged backgrounds than those who have marital births, and they continue to be more disadvantaged after giving birth (Driscoll et al. 1999). Recently, research has documented an increasing difference in the economic well-being of married and unmarried mothers, such that unmarried mothers are increasingly disadvantaged relative to married mothers (Musick 2000). Because non-marital

fertility is experienced disproportionately by minority women these changes have important implications for the well-being of minority women and their children.

1.2 Research Aims

The aims of the present research are:

1. To evaluate the extent to which demographic, socioeconomic, and life course factors account for race/ethnic differences in the risk of a first premarital birth, with particular emphasis on Mexican American women.
2. To evaluate the extent to which characteristics of the community context, at the level of the county and census tract, account for race/ethnic differences in the risk of a first premarital birth, with particular emphasis on Mexican American women.
3. To determine whether Mexican American women are affected in similar ways as Black women by their minority status within the United States, or whether a distinct ethnic heritage and/or ethnic experience independently shapes their family formation.

1.3 Outline of Dissertation

The aims listed above are addressed in the next four analytic chapters. Though the chapters build on one another, each chapter contains its own literature review used to generate chapter-specific hypotheses and its own data/methods, results, and discussion sections. Chapter 2 uses data from the 1995 National Survey of Family

Growth (NSFG) to look at the relationship between race/ethnicity and non-marital fertility, paying particular attention to the non-marital fertility of Mexican American women. First, I look at the role that family background characteristics, a women's own employment and school enrollment status, and cohabitation status play in mediating this relationship. Secondly, I explore the possibility that the effects of cohabitation and employment/schooling experience may vary across race/ethnic groups. This chapter looks at these relationships at different stages in the life course and for different groups of women based on socioeconomic status.

Chapters 3 and 4 use the NSFG, supplemented with data from the 1995 NSFG contextual data file (NSFG-CDF), to explore the relationship between social context and non-marital fertility. Chapter 3 looks specifically at the role of instrumental mechanisms, measured at the level of the county, which describe how individual agency is limited by community level opportunity structures. Chapter 4 additionally looks at the role of socialization mechanisms, measured at the census tract, which describe how neighborhoods socialize those who grow up or live in them (Small and Newman 2001). Together these chapters explore the ways in which community context impacts non-marital fertility and whether the overrepresentation of Mexican American women in disadvantaged communities accounts for any of the race/ethnic difference in non-marital fertility. Both chapters also determine whether community level characteristics identified as particularly important for Hispanic populations (e.g. immigration, ethnic concentration, underemployment, etc.) additionally impact the

non-marital fertility of Mexican American women. Lastly, both chapters specifically explore Wilson's claim that poor women fare particularly poorly in disadvantaged communities.

In order to more fully address the last research aim, Chapter 5 conducts a set of analyses using a sample of mothers from the Fragile Families and Child Wellbeing Study. I first look at race/ethnic differences in the relationship status between the biological mother and the biological father at the birth of their child (among all couples and among unmarried couples) and at race/ethnic differences in attitudes surrounding marriage and cohabitation. Secondly, I look at the effect of relationship status and relationship related attitudes on the likelihood of marriage 1 year after the birth of the child. Lastly, I determine whether there are race/ethnic specific effects of relationship status on the likelihood of marriage.

Chapter 2: Race/ethnic differences in non-marital fertility: characteristics of women and their families of origin

2.1 Introduction

Numerous previous studies have documented the sociodemographic determinants of Black/White differences in non-marital fertility (Wu 1996; South and Crowder 1999; South 1996; South 1999; Billy and Moore 1992). Three categories of explanatory variables have been emphasized: characteristics of the woman's family of origin, the demographic and socioeconomic characteristics of the woman, and characteristics of her place of residence (South 1999). However, relatively little research investigates non-marital fertility among Mexican Americans. This is surprising given that the little we know about Mexican American non-marital fertility suggests that rates are high. Research has documented the increase in non-marital fertility for all groups of women over time (Bachu 1999; Bachrach et al. 2000; Musick 2000). However, while Black/White differences have recently narrowed somewhat, Hispanic/White differences are continuing to grow (South 1999).

This chapter explores differences in non-marital fertility between Mexican American women and White and Black women, focusing in particular on the characteristics of women and their family of origin. Though the non-marital fertility behavior of immigrants is in itself interesting and offers important information about how immigrant groups adapt over time, this dissertation will generally focus on U.S.

born Mexican Americans and the 1.5 generation (those who migrated to the U.S. before age 12). This limits the likelihood that race/ethnic differences in non-marital fertility will be associated with the immigration experience itself, as research has documented substantial differences in family formation behaviors by nativity and/or age at immigration (Stephen and Bean 1992; Oropesa, Lichter, and Anderson 1994; Bean, Swicegood, and Berg 2000; Delgado 2001; Glusker 2001; Catanzarite and Ortiz 2002). This chapter will first provide descriptive statistics of the race/ethnic variation in the likelihood of having a non-marital first birth. Secondly, it will explore how demographic, socioeconomic, and life course factors contribute to these differences. Given that the social, historical, and economic experience of the Mexican origin population is distinct from that of other minority groups in the U.S., such as African Americans, explanations for Black/White differences in non-marital fertility may not hold up for Mexican American/White differences.

2.2 Background

Research describes a culture among the Mexican origin population that is more familistic than among non-Hispanics. This perspective emphasizes normative differences among the Mexican origin population resulting from a culture that is very family oriented; individuals are more emotionally bound to extended family and children than are Whites and are unusually warm, caring, and protective of their family (Del Castillo 1984, Vega 1990). Some argue that these strong cultural influences, imported from Mexico, continue to shape the values and behaviors of

Mexican Americans in the U.S. (Grebler, Moore and Guzman 1970; Flores, Eyre, and Millstein 1998). An important element of this perspective emphasizes male dominance in the family. In contrast, the woman's primary role is of homemaker and mother (Alvirez, Bean, and Williams 1981). Some empirical research supports this perspective, finding that Mexican American women do indeed hold more pro-nuptial orientations (Oropesa 1996; Oropesa and Gorman 2000) and desire more rapid transitions to marriage and motherhood (East 1998) than White women. Important to this perspective is the cultural expectation that girls not engage in premarital sex (Erickson 1998; Del Castillo 1984; Flores et al. 1998). In fact Dietrich (1998) argues that among the Mexican Americans girls she studied maintaining virginity was critical to maintaining a favorable reputation in the community. Yet despite this, non-marital fertility is quite high among Mexican American women.

In her work looking at childbearing among Latina adolescents in Southern California, Erickson (1998) suggests that there exists an alternative normative ordering of life events for disadvantaged Latina teens within the United States, one that results in a more supportive climate for non-marital fertility. This alternative normative order still encourages a strong adherence to traditional female roles, yet proposes a timing and sequencing of life course events, such as marriage and motherhood, that is distinct from both the middle class White culture and the middle and upper class Latin American culture. Erickson finds that while many teen mothers are married, many are not and many are in informal unions. This is particularly true

for those of lower socioeconomic status and those who are more acculturated (i.e. the native born and those who have lived in the U.S. for a long period of time). Erickson suggests that this pattern of early and premarital fertility may have developed partly in response to the bleak life opportunities available to these women. This is similar to the proposition put forth by Stack (1974), followed by Geronimus (1992), that early childbearing may be an adaptive strategy adopted in the face of severe disadvantage in certain Black communities. Taken together, Erickson suggests that teenage childbearing may be more culturally acceptable within the Latino community and whether within marriage or not, signals a young Latina's transition to adulthood.

This discussion emphasizes the role of two interrelated factors that contribute to early childbearing among Latina women and thus may contribute to higher non-marital fertility among Mexican American women. First, the socioeconomic disadvantage experienced disproportionately by this group of women relative to White women may promote a non-normative sequencing of life events that delays marriage and encourages non-marital fertility. Secondly, because cohabitation in response to a premarital pregnancy is one component of this alternative sequencing of life events, informal unions between men and women of Mexican origin may account for part of the race/ethnic variation in non-marital fertility.

2.2.1 Socioeconomic Status and Non-Marital Fertility

There exists a strong relationship between socioeconomic status and pathways to family formation (Stier and Tienda 1997; South 1996; South 1999; Bachrach et al.

2000). Poor women are less likely to marry (McLaughlin and Lichter 1997; Sassler and Schoen 1999), are more likely to cohabit (Smock 2000), and are more likely to have a non-marital birth than non poor women (Wu 1996; South 1999). Characteristics of a woman's family of origin are important, though the effects vary across the life course. The behavior of adolescent women is more strongly influenced by the socioeconomic characteristics of their family of origin than is the behavior of women over the age of 20 (South 1999). Among adolescents, families with greater resources may set higher goals and place more emphasis on achievement for their children than families with fewer resources, goals that conflict with early sexual initiation and childbearing (Miller and Moore 1990). Additionally, disadvantaged families tend to reside in disadvantaged neighborhoods characterized by a lack of opportunities and role models, which in turn may contribute to the development of an alternative sequencing of life course events (Stier and Tienda 1997; Erickson 1998; Geronimus 1992). Minority women, including Mexican American women, disproportionately come from disadvantaged backgrounds.

The socioeconomic and demographic characteristics of women themselves are also important in the sequencing of family formation behaviors, particularly their schooling and employment experiences. It has been argued that the opportunity costs associated with non-marital fertility are too great for women who are employed or are preparing for a career by being enrolled in school (South 1999). Empirically, research has documented the strong association between being enrolled in school and/or being

employed and contraceptive use as well as the resolution of a pregnancy (Coverdill and Kraft 1996). Coverdill and Kraft (1996) find that school enrollment, higher wages, and longer periods of employment generally lower the risk of a premarital conception and increase the likelihood of having an abortion as opposed to a marital or premarital birth. Research has also shown that both full-time and part-time employment and in particular, being enrolled in school, reduces the likelihood of getting pregnant (Budig 2003). While being enrolled in school delays marriage, so that those who leave school earlier tend to transition to marriage earlier, a higher level of completed education ultimately increases the likelihood of ever marrying (Thornton, Axinn, and Teachman 1995; Oppenheimer, Kalmijn, and Lim 1997). Mexican American women have very low levels of education. Recent estimates of educational achievement show that only 62.8 % of the Hispanic population age 25-29 has a high school degree. This is much lower than the figure for Whites (94.0%) and Blacks (86.8%) (Bureau of Labor Statistics 2001). This is potentially one reason why Mexican origin women are at a greater risk of experiencing a non-marital birth. As they leave school they may be encouraged to transition to adulthood through childbirth or marriage. However, their lower levels of educational attainment increase their risk of exposure to a non-marital birth by reducing the likelihood of marriage.

Importantly, the effect of school enrollment and employment may vary across race/ethnic groups. Perceived opportunities regarding employment and education have been linked to early non-marital childbearing (Astone and Upchurch 1994;

Luker 1996). Focusing on expectations of sexual activity and non-marital childbearing, East (1998) finds that girls' future school and job aspirations were important in deterring expectations of those events. She concludes that having a strong school-job orientation "might act as a protective factor against early, non-marital sexual behavior and childbearing" (p. 159). However, in this study this relationship did not hold for Hispanic girls; advanced educational expectations were not linked to expectations of sexual or non-marital behavior. East (1998) argues that culture-specific norms exist such that Mexican American girls are being socialized for marriage and childrearing to the exclusion of work-related or school-related roles. This perspective is corroborated by other research. Erickson (1998: p. 97) finds that, "Although education was perceived as important, the maternal role took precedence even among the English speakers and U.S.-born who were better schooled and had higher educational aspirations then the Spanish speakers and the foreign-born." Other researchers (Portes and Rumbaut 2001; Dietrich 1998) argue that the experience of Mexican Americans in the U.S. has led to the emergence of a reactive ethnicity or 'oppositional culture' in Mexican American communities that rejects educational achievement and devalues schooling among adolescents. Taken together, this suggests that enrollment in school or employment may have less of a deterrent effect on non-marital fertility for Mexican American women than for other groups of women.

2.2.2 Cohabitation among Mexican Origin Women

In general it is becoming increasingly true that cohabitation accounts for a significant portion of the births to unmarried mothers. Bumpass and Lu (2000) report that roughly 40% of non-marital births overall occur in cohabiting unions and as much as 50% do for non-Hispanic Whites and Hispanics. Levels of cohabitation and the meaning of cohabitation vary across many factors, but notably across SES and race (Bumpass and Lu 2000; Smock 2000; Manning and Landale 1996; Manning 2001), thus it could be a key factor in explaining differences between Mexican American women and White women. For example, Manning and Landale (1996) find that cohabitation has a much stronger positive effect on the likelihood of a non-marital birth among Puerto Ricans than Non-Hispanic Whites or African Americans. Additionally, there has been an increasing likelihood of cohabitation rather than marriage in response to a premarital pregnancy (Raley 2001) and differences between groups in this likelihood help to explain some of the racial difference in non-marital fertility rates (Parnell et al. 1994; Coverdill and Kraft 1996; Bachu 1999).

Little research has looked at the role of cohabitation in family formation among Mexican Americans. Some research suggests that informal unions are quite common and socially accepted, stemming from a history of informal unions in Mexico (Del Castillo 1984; Castro Martin 2002; Solis 2004). Historically, while fidelity and marriage were held up as ideals, there existed a large number of 'union libres' among the working class, often because civil ceremonies were not feasible.

Oropesa (1996), looking at the normative beliefs surrounding cohabitation and marriage in the U.S. found that Mexican origin men and women are no more likely to support cohabitation compared to Whites, though they are significantly more likely to support cohabitation if it will be followed by marriage. Whether these beliefs translate into behaviors, such as increased cohabitation, that increase the likelihood of non-marital fertility is unknown.

Cohabitation may help explain the differences between Mexican origin and White women, or it may be a factor merely associated with socioeconomic disadvantage. If, as Erickson (1998) suggests, cohabitation helps explain the higher levels of non-marital fertility among Mexican American women, we would expect that controlling for this factor would narrow the gap between all Mexican origin women and White women, net of other individual level socioeconomic controls. Additionally, to the extent that informal unions are more likely to be viewed as an acceptable alternative to marriage for Mexican Americans, childbearing within cohabiting unions may be more common than for Whites or Blacks.

2.3 Research Objectives

The analyses in this chapter focus on the relationship between race/ethnicity and the risk of a first premarital birth, paying particular attention to the non-marital fertility of Mexican American women. First, I look at the role that family background characteristics, a women's own employment and enrollment status, and cohabitation status play in mediating this relationship. Secondly, I explore the possibility that the

effects of cohabitation and employment/schooling experience may vary across race/ethnic groups. However, to better understand race/ethnic differences in non-marital fertility, this chapter looks at these relationships at different stages in the life course and within different groups of women.

As discussed above, some variables have non-proportional effects on non-marital fertility across the life course. It is important to keep in mind that adolescent fertility and non-marital fertility are separate phenomena (Small and Newman 2001). Thus adolescent fertility, more likely to be non-marital because women are less likely to get married at young ages, is likely influenced by different factors than is non-marital fertility in general, a large proportion of which occurs to older women. Empirical research verifies this; variables such as family structure and parental education have a more immediate and stronger effect on younger women reflecting the different processes affecting non-marital fertility among older and younger women (South 1999). For teenage women, the effects of these variables may in part reflect the effects of parental supervision and monitoring, factors less likely to be relevant for the fertility of older women. Schooling is also likely to have different meanings for younger and older women. First of all, high school enrollment is only relevant for younger women as very few women over the age of 20 are enrolled in high school. However over age 20, having completed a high school degree becomes more relevant. It may also be the case that being enrolled in any kind of school, high school or college, has a stronger deterrent on the risk of a non-marital birth for

younger women relative to older women. The normative prescriptions separating childbirth and schooling are certainly stronger for younger women. Additionally, we know from Goldscheider and Waite (1986) that the effect of school enrollment on marriage varies by age. For the same reason the effect of employment may vary by age. As a result, I look at the research objectives posed above separately for older and younger women.

Much of the research looking at the high levels of adolescent and non-marital fertility in minority populations focuses specifically on *disadvantaged* minority women (Geronimus 1992; Dietrich 1998; Erickson 1998; Wilson 1987; Massey and Denton 1993; Moore and Chase-Lansdale 2001). However in this research it is often difficult to disentangle race/ethnic effects from poverty effects. Stier and Tienda (1997) hypothesize that minority group status and poverty exert independent effects on family formation pathways. Women of lower socioeconomic status face a set of economic and social realities that will impact the sequencing of life course events regardless of race. However, there is some evidence that the effect of poverty status on family formation processes varies by race/ethnicity. For example, Stier and Tienda (1997) find that family formation patterns of urban Mexican origin women are less variable across family income than are those for Whites and Blacks. As a result, the differences between urban Mexican origin women and White women in the likelihood of having a premarital birth are narrower for poor women compared to

nonpoor women. Given this, I look at the above objectives separately for women of lower and higher socioeconomic background.

It is also likely that the degree to which schooling/employment and cohabitation mediate race/ethnic differences in non-marital fertility will differ by socioeconomic status. Much of the literature looking at the non-marital fertility of disadvantaged minority women documents a culture, or normative climate, in which women and their peers place less value on education and are more likely to transition to adult status through parenthood, often outside of marriage (Massey and Denton 1993; Dietrich 1998; Erickson 1998; Kaplan 1997). As noted above, Portes and Rumbaut (2001) and Dietrich (1998) document a culture among disadvantaged Mexican American youth that devalues schooling. If this is the case, then schooling may have less of a deterrent impact on the non-marital fertility of lower socioeconomic status minority women than on minority women of higher socioeconomic status. Similarly, cohabitation is cited by Erickson (1998) as part of the alternative normative ordering of life events experienced by disadvantaged Mexican American women. As a result, cohabitation may have particularly strong positive effects on non-marital childbearing for lower SES Mexican American women.

2.4 Data and Methods

The primary data source in this study is the 1995 wave of the National Survey of Family Growth. This nationally representative individual level survey, conducted

by the National Center for Health Statistics, is a periodic household survey of U.S. women aged 15-44 that focuses on gathering retrospective data related to fertility, family formation, and contraception. 10,847 non-institutionalized civilian women were interviewed in their homes by trained female interviewers; Hispanic and non-Hispanic Black women were oversampled (Potter et al. 1997). The analyses in this paper focus on the non-marital fertility of non-Hispanic White, non-Hispanic Black, and Mexican American women. Mexican American women include both the U.S. born and the 1.5 generation (those who migrated prior to age 12).[1] Applying these restrictions results in a working sample of 9,054 women: 6,127 White, 2,293 Black, and 634 Mexican American women. An advantage the 1995 survey has over earlier surveys is that it collects very detailed event history information, after the major wave of immigration in the late 1980's, on a number of critical life experiences, including the educational, work, marital, cohabitational, and fertility history of each woman. Additionally, information on the living arrangements of each woman growing up is collected.

The analyses use these retrospective histories to identify the non-marital fertility experiences of women. To measure the risk of a premarital first birth, a person half-year file is created containing multiple observations for each women; one for each six month period in her life from age 10 through age 44 (or age at censoring).

[1] Previous research has suggested that the 1.5 generation is more similar to the U.S. born population than the foreign born as they have spent a large part of their youth in the U.S. educational system within U.S. communities (Rumbaut 1996). Additionally, preliminary analysis (not shown) demonstrates that the non-marital fertility of these two groups is very similar.

The dependent variable is a dichotomous measure that takes on a value of 1 if a premarital birth occurred within that six-month period. This variable thus contrasts the likelihood of having a non-marital birth to being not married and not having a non-marital birth. Because the timing of the event is censored after certain points in an individual life history, observations are dropped that occur after a first premarital birth, marriage, or date of interview (whichever occurs first). This file consists of 225,789 person half-year observations. In order to look specifically at the research objectives outlined above, this sample is twice divided into two smaller samples. The first separates older person half-years (age 20 and older) from younger person half-years (less than age 20). The second separates women of higher socioeconomic background (parents with at least some college or a college degree) from those of lower socioeconomic status (parents with a high school diploma or less).

Discrete-time logit models predicting the risk of a non-marital birth within each of these samples are estimated using the logistic procedure in SAS (Allison 1984). Discrete-time models have an advantage over continuous-time models in that they can more easily incorporate time-varying covariates (Allison 1984, Yamaguchi 1991). The models are set up to allow a half-year lag between the time-varying explanatory variables and the dependent variable in order to ensure that the explanatory variables actually precede the event of interest. Thus, the models are set up to predict the risk of a non-marital birth within the next six months, controlling for characteristics within the current six month period.

The primary independent variable measures race/ethnicity. In these analyses White is the reference category. The NSFG contains a detailed cohabitation, work, and educational history for each woman, which allows for the construction of time-varying indicators of cohabitation, enrollment in school, and full or part time employment measured every half-year from age 10 until censored or time of interview. For each person half-year observation, a variable measuring cohabitation is coded 1 if a woman is in any premarital cohabiting relationship in that half-year. Three measures of education and school enrollment are created. First, for the younger sample and the two socioeconomic samples, being currently enrolled in high school is coded 1 if the woman is in high school and being currently enrolled in college is coded 1 if the woman is enrolled in any kind of post-secondary program during that half-year. For the older sample, a dichotomous variable is created which takes on a value of 1 if the woman has completed a high school degree. Again, being currently enrolled in college is coded 1 if the woman is enrolled in any kind of post-secondary program. For all samples, similar measures for full time and part time employment are constructed that are coded 1 if a person is employed full time or part time in each half-year period. As mentioned above, all of these variables are lagged one half-year with respect to the dependent variable.

To control for race/ethnic differences in family structure and the socioeconomic status of the family of origin, variables indicating the educational attainment of the most educated parent and household composition while growing up

are included. For the younger and older samples, the educational attainment variable identifies those whose most educated parent did not finish high school, graduated from high school, had some college, or had a college degree. A dummy variable indicating missing information on parental education is included. High school is the reference category. For the higher socioeconomic status sample, one variable indicates whether the parent has less than a college degree while for the lower socioeconomic sample one variable indicates whether the parent has less than a high school diploma. For all samples, the household composition variable has 4 categories indicating whether the respondent was in a two-parent, single parent, step parent, or other family type at age 14. A two-parent family is the reference category. Research has found that in addition to family structure while growing up, the greater the number of family type transitions while growing up increases the likelihood of a premarital birth (Wu 1996). Recent research suggests that the effect of family turbulence may be in part serving as a proxy for unobserved family factors, such as parental environment and communication, which impact later outcomes (Powers 2004). Lacking measures of these family characteristics, these analyses include a variable that counts the number of transitions into and out of any parental marital/cohabitational state from birth though age 12 for each woman (Raley and Wildsmith 2004).[2]

[2] A transition from cohabitation to marriage is not counted as a separate transition.

The religious denomination each woman was raised in is included as a control variable, particularly because we are looking at Mexican American women. Much of the discussion about family formation and sexuality among the Mexican origin population emphasizes the role of Catholicism, particularly the pro-natalist and pro-marital views of this faith (Del Castillo 1984; Erickson 1998). However, research has found that religious denomination plays less of a role in family formation than it once did. As Lehrer (2000) documents, Catholics born prior to 1960 actually have intermediate ages at union formation while the effect is insignificant for those born after 1960. In fact, Fundamentalist Protestants are the most likely to enter a marriage early. A 4 category variable is created identifying whether a woman grew up as a Catholic, Mainstream Protestant, Fundamentalist Protestant, or of another or no faith. Mainstream Protestant is the reference category.

In the analyses of all samples, additional controls are added for age and period. Age is included as a time-varying variable which allows the rate of a non-marital birth to vary across age. For the socioeconomic samples, this variable has 4 categories that identify whether the person half-year was experienced when the woman was less than 17 years of age, was between 17-20 years of age, between 21-25 years of age, or was older than 25.[3] For the older sample, one variable indicates whether the woman was greater than 25 years of age while for the younger sample one variable indicates whether the woman was less than 17 years of age. A 4 category

[3] Alternative categorizations of age were explored; this one provided the best fit.

variable captures period effects as the risk of non-marital birth has increased over time. This variable indicates whether each person half-year was experienced in 1960-1969, 1970-1979, 1980-1986, or 1987-1995. Preliminary analysis indicated that these were 'natural' temporal breaking points associated with changes in the risk of a premarital first birth.

2.5 Results

2.5.1 Descriptive Results

To provide an overview of the race/ethnic differences in the risk of a first premarital birth, Figure 2.1 depicts a survival analysis of the timing of first premarital birth by race/ethnicity for the entire sample. For all women the risk of a non-marital birth is highest in late adolescence and early adulthood, as indicated by the greater steepness of the curves at these ages. Clearly however, at all ages Mexican American women's age specific risk of a non-marital birth is higher than for Whites, though not as high as for Blacks. By age 20, roughly 17% of Mexican American women have had a first premarital birth compared to 6% of Whites and 34% of Blacks. The race/ethnic difference in the risk of a non-marital first birth is somewhat larger for women under the age of 20 compared to women over the age of 20.[4] Similar to the findings of Stier and Tienda (1997), there are differences in the association between race/ethnicity and the risk of a non-marital birth by socioeconomic status. Table 2.1

[4] This difference is not significant. However, the justification for looking at younger and older women separately is not based on race/ethnic differences across age, but rather on age variation in the effects of explanatory variables on non-marital fertility.

shows the percentage of women who have had a premarital first birth by race/ethnicity, age, and socioeconomic status. Women of lower SES have higher levels of non-marital fertility than do women of higher SES. However, race/ethnic differences in the risk of a non-marital birth appear to be slightly larger among women of higher SES compared to those of lower SES.[5] For example, lower SES Mexican American women have roughly twice the risk of a non-marital birth by age 30 compared to lower SES White women (28.3/13.8); however, higher SES Mexican American women have 2.5 times the risk of higher SES White women by age 30 (19.4/7.7).

Table 2.2 reports the percentage distribution of the independent variables used in the analyses. Mexican American women are most likely to be Catholic while Black women are most likely to be Fundamentalist Protestant. Regarding family background, not surprisingly, the parents of Mexican American women have very low levels of education, much lower than for White and Black women. White women were in the most stable family environments at age 14 and Black women were in the least stable families. Mexican American women fall in between, though their families are only slightly less stable than White families. The pattern is somewhat different when family turbulence is measured. Interestingly, despite the fact that Mexican American women are more likely to have lived in an intact family at age 14, they actually have a slightly higher mean number of family transitions by age 12 than do

[5] In the logistic regression analysis, race/ethnic/SES interactions significantly improve fit of model.

White and Black women. This suggests that Mexican American families that were not intact when the woman was age 14 are particularly turbulent. Regarding cohabitation, there is actually not much variation in the proportion of women who ever cohabited prior to a first marriage, however Mexican American women are the least likely to have done so. Despite the fact that Mexican Americans are less likely to cohabit, cohabitation might still be a significant contributor to their higher rates of non-marital fertility if the rate of childbearing within cohabiting unions is higher for this group. Regarding enrollment in school, Mexican American women are the least likely to be enrolled in high school at age 17 and in college at age 20. This is consistent with previous research. To the extent that early school leaving increases the risk of a non-marital birth, controlling for this factor should reduce Mexican American/White differences in non-marital fertility. At age 20, Mexican American women are the most likely to be working full time, though this does not differ much from Whites. However, Mexican American women are less likely than White women to be employed part time at this age and are more similar to Black women in this regard.

2.5.2 Regression Analyses – by Age

In order to address the research objectives described above, discrete-time event history analyses modeling the relationship between race/ethnicity and the non-marital fertility rate are conducted for each of the 4 samples. The independent variables are added in a stepwise fashion. Tables 2.3 and 2.4 present the odds ratios from these analyses for younger and older women, respectively. These models

provide insight into the general relationships being explored, but keep in mind that processes affecting non-marital fertility likely differ for older and younger women.[6] The first models in each of the tables present the baseline relationship between race/ethnicity and non-marital fertility controlling for age and period effects. These results corroborate the lifetable analysis; all minority women have significantly higher non-marital rates than White women. Among young women, Black women have greater than 6 times the risk while Mexican American women have roughly 3 times the risk of a non-marital birth. The race/ethnic effects are somewhat smaller for older women, though the difference between the samples is not significant. The age and period effects operate as expected in both samples. Among the younger sample, women less than age 17 have a much lower risk of a non-marital birth than women between the ages of 17 and 19, while among the older sample, women greater than age 25 have a much lower risk than those between the ages of 20 and 24. In both samples, non-marital fertility rates are higher in more recent periods.

Model 2 adds the family background and family socioeconomic status variables. Though the families of Mexican American women are not much less stable than White families, they are substantially more disadvantaged as measured by parental educational attainment. Blacks are more disadvantaged than Whites on both measures. Controlling for these factors reduces race/ethnic differences in the risk of a non-marital birth, for both younger and older women. Though the number of family

[6] Analyses (not shown) confirm that the effects of family structure, family socioeconomic status, religion, cohabitation, and work/schooling do vary significantly by age.

transitions experienced while growing is not associated with non-marital fertility, family structure at age 14 is. Focusing first on younger women, those from single and step parent households are over 70% more likely to have a non-marital birth than those from two parent households, and those from households without either parent have roughly a 50% greater risk. An unstable family history is less strongly associated with non-marital fertility among older women, with one exception. Older women growing up in a household with no parents present have over twice the risk of a non-marital birth compared to those with two parents present. It is possible that this measure is tapping into other unmeasured aspects of socioeconomic disadvantage not picked up by parental education. Many young women not living with either parent are living with grandparents or other relatives. It may be the case that while younger women do benefit from the resources in these families while living there, they are less likely to once out of the household when they are older.

Regarding parental education, it appears similarly important for younger and older women, though having a parent with less than a high school degree is no worse than having a parent with a high school degree among older women. Increased parental education is associated with significant decreases in non-marital fertility rates and women with at least one parent with a college degree have the lowest risk of a non-marital birth. Among younger and older women, being raised as a Fundamentalist Protestant increases the risk of a non-marital birth relative to being raised as a Mainstream Protestant. So, in addition to entering marriage earlier than

other women as found by Lehrer (2000), Fundamentalist Protestants appear to enter unmarried parenthood earlier as well. Catholics, perhaps despite a more pro-natal orientation and stronger proscriptions against premarital sex (Rindfuss, Morgan, and Swicegood 1988), are at no greater or less risk of a premarital birth than Mainstream Protestants. Interestingly older women raised in an 'other' religion have a significantly higher risk of experiencing a non-marital birth. In this category, roughly 80% chose no religious background or no particular denomination.

Controlling for these family background characteristics somewhat reduce race/ethnic differences in non-marital fertility. However, as outlined above, this is only one component of the relationship between socioeconomic status and family formation. Though not completely independent of family background, the schooling and employment trajectories of women are expected to have an important independent impact on the non-marital fertility behavior of women. Model 3 adds controls for these variables. For younger women, enrollment in school and being employed full or part time have strong and significant deterrent effects on non-marital fertility. Being enrolled in college is an even greater deterrent than being enrolled in high school, supporting South's (1999) assertion that preparing for a career is an especially strong deterrent to non-marital fertility. Enrollment in college may indicate a more career-oriented path than high school enrollment. Part time and full time employment have similar effects on non-marital fertility. Employed women are only 40% as likely to have a non-marital birth compared to women who are not employed.

As expected, being a high school graduate, being enrolled in college, and being employed all significantly reduce the risk of a non-marital birth among older women, but significantly less so than for younger women.[7] Yet despite race/ethnic differences in employment and school enrollment, these variables do relatively little to change race/ethnic differences in non-marital fertility, for both younger and older women. It may be the case that these differences are already accounted for with parental education. School enrollment and employment status do in fact partly mediate the relationship between parental education and non-marital fertility as seen by a drop in the strength of parental education in Model 3.

The next models explore the role of cohabitation. In addition to having an independent impact on non-marital fertility, cohabitation is expected to mediate the relationship between socioeconomic status and non-marital fertility. Model 4 controls for cohabitation and we can see that being in a cohabiting union greatly increases the risk of a non-marital birth for younger and older women, though much more so for younger women. With the exception of younger Mexican American women, differences between minority women and White women actually increase when cohabitation is controlled. Keep in mind that the effects of cohabitation are not allowed to vary by race/ethnicity. Including cohabitation does relatively little to mediate the relationship between family background/socioeconomic status and non-marital fertility.

[7] Analyses showing significant difference between older and younger women are not shown.

However, it may still be the case that employment, enrollment, and cohabitation work differently for minority women relative to White women; this possibility is explored in Model 5. Model 5 includes interactions between school enrollment (in high school or college) and race/ethnicity for younger women and having a high school degree and race/ethnicity for older women. [8] Additionally, these models include interactions between race/ethnicity and cohabitation for both sets of women.

Focusing first on education, we see that for younger women school enrollment is not as strong a deterrent of non-marital fertility among minority women as it is for White women. The effect for young Black and Mexican American women is only 73% and 79%, respectively, of the effect for White women. This contributes to race/ethnic differences in the risk of a non-marital birth. Similarly, among older women, having a high school diploma is much less of a deterrent for Black women than for White women. Although still below one, the odds ratio reflecting the impact of having a high school diploma on the risk of a non-marital birth is 3 times greater for Black women compared to White women. However, there is no difference in the effect of a high school diploma on the non-marital fertility of White and Mexican American women.

Turning to cohabitation, we see that the interaction effects are strong and significant. Among younger women, the impact of cohabitation on the risk of having

[8] Interactions for employment and race/ethnicity were not significant.

a non-marital birth for Black women is only half the impact for White women while the impact among Mexican American women is over twice that for White women. The interaction between cohabitation and non-marital fertility is significant for older women as well, though appears to be somewhat weaker than for younger women. For both sets of women, differences in the likelihood of having a birth within a cohabiting union contribute to race/ethnic differences in the risk of a non-marital birth.

2.5.3 Regression Analyses – by Socioeconomic Status

The above analyses confirm that family background characteristics, including socioeconomic status and cohabitation are significantly associated with non-marital fertility and that these effects do vary somewhat by age. Controlling for these factors reduce race/ethnic differences in the risk of a non-marital birth. However, as mentioned above, much of the theoretical focus on minority non-marital fertility is on the non-marital fertility of disadvantaged women. As a result, the next analyses look at the relationships above separately for lower and higher socioeconomic status women, as indicated by parental education. This accomplishes two goals. First, it documents differences by socioeconomic status in the relationship between race/ethnicity and non-marital fertility. Secondly, it determines whether or not the relationships between a woman's schooling/and or employment status, cohabitation status, and non-marital fertility vary by socioeconomic status as previously hypothesized. For these analyses age groups are combined. Despite the fact that the effects of some of the independent variables vary by age, the direction of the effects

and the significance levels of most variables are consistent across ages. Combining these samples gives the models in these analyses more power.

Tables 2.5 and 2.6 present the results from discrete-time event history models modeling the risk of a non-marital birth for women of lower and higher socioeconomic status, respectively. Again, coefficients are presented as odds ratios. Model 1 in each panel presents the baseline relationship between race/ethnicity and non-marital fertility. As found by Stier and Tienda (1997), race/ethnic differences are narrower for lower socioeconomic status women relative to higher socioeconomic status women.[9] The Mexican American/White difference is roughly 30% greater ((3.07-2.14)/3.07) among high SES women, while the Black/White difference is roughly 23% ((6.56-5.05)/6.56) greater. Minority women do not gain from increases in socioeconomic status to the extent that White women do.

The second model in each Table depicts results from the final models in the last set of analyses (Models 5). Family structure has a stronger effect on the non-marital fertility of higher SES women compared to lower SES women, in particular being raised in a household with no parent present.[10] Though not significant, religious background appears to matter slightly more among women of higher SES, with Fundamentalist Protestants and women of an "other" religious background having higher non-marital fertility than Mainstream Protestants.

[9] These differences are statistically significant.
[10] These differences are statistically significant.

The schooling/employment variables have statistically similar effects on the non-marital fertility of lower and higher SES women (analyses not shown). However the interaction between race/ethnicity and school enrollment, shown in Models 5 of Tables 2.3 and 2.4, is dependent on socioeconomic status. Among lower SES women, school enrollment is significantly less of a deterrent for minority women compared to White women. However, among the higher SES this is not the case for either Black or Mexican American women (though the coefficients remain positive). This finding lends some support to the hypothesis that disadvantaged minority women may have a particularly weak attachment to schooling, even among those that do not drop out.

As in the previous set of analyses, being in a cohabiting relationship strongly and significantly increases the odds of having a non-marital birth. Yet again, the race/ethnic interaction with cohabitation depends on socioeconomic status and only holds for those of lower socioeconomic status. Among lower SES women, Black women are much less likely to have a birth in a cohabiting union while Mexican American women have a much greater risk of having a birth in a cohabiting union than White women.

2.6 Discussion

Little research has looked at non-marital fertility in the Mexican origin population. This chapter documents race/ethnic differences in non-marital fertility between non-Hispanic Black, non-Hispanic White, and Mexican American women. Descriptive analysis confirms that Mexican American women have significantly

higher levels of non-marital fertility than White women. So why, in a culture that appears to place a higher premium on premarital chastity, marriage, and motherhood, is non-marital fertility higher for Mexican American women? Building on the work of Erickson (1998) that suggests the emergence of an alternative ordering of life course events, including cohabitation, partly in response to the socioeconomic disadvantage faced by Latina women, this chapter looks at the impact of family background characteristics, school enrollment and employment, and cohabitation on non-marital fertility. These relationships are explored separately for younger and older women as processes affecting the likelihood of a non-marital birth vary across the life course. Much of the theory attempting to explain the non-marital fertility of minority women focuses on *disadvantaged* minority women. As a result, once the initial relationships are established, further analyses are conducted to determine whether these relationships vary by socioeconomic status.

It is clear that family background is very important. Reflecting the greatest area of disadvantage for each group, differences in family structure explain a larger portion of Black/White differences while differences in parental education explain a larger portion of Mexican American/White differences in non-marital fertility. The effects of these characteristics do vary across the life course, in particular the effect of family structure. Not surprisingly, having lived in a single or step parent household at age 14 is much more disadvantageous for women under the age of 20 than for those over the age of 20. Regardless, children who have experienced time in a single parent

or divorced household have had, at some time, less access to parental supervision and economic resources than those from two parent families (McLanahan and Sandefur 1994). Parental time and money help shape the life course trajectories of young women by monitoring behavior and by shaping opportunities available to women. Though impossible to parcel out the particular cause, it is the case that once school enrollment and employment are controlled, the effect of family structure (and parental education) weakens somewhat suggesting that these factors operate at least in part by shaping school and career opportunity. Family structure appears to have somewhat stronger effects for women of higher socioeconomic status relative to those of lower socioeconomic status.

As expected, school enrollment and employment have strong independent deterrent effects on non-marital fertility, for older and younger women as well as for higher SES and lower SES women. It has been suggested that minority women, particularly Mexican American women (as discussed in this chapter), may have a weaker job-school orientation than White women (East 1998; Dietrich 1998; Portes and Rumbaut 2001). Because of this it was hypothesized that school enrollment may not deter non-marital fertility for minority women as strongly as it does for White women, particularly for lower SES women. In these analyses, the effect of school enrollment and educational attainment did vary by race/ethnicity. Among younger women, both Mexican American and Black women enrolled in school had a significantly greater risk of a non-marital birth than White women enrolled in school.

However, among older women, having a high school diploma worked similarly for Mexican American and White women, only offering less protection for Black women. This lends some limited support to the idea that some Mexican American women may have a weaker school orientation than White women. However, as discussed previously, the 'oppositional culture' that devalues education among Mexican Americans is argued to emerge in response to a history of discrimination and in a context of socioeconomic disadvantage. Confirming this perspective, enrollment in school is only significantly less of a deterrent to the non-marital fertility of lower SES minority women compared to lower SES White women. There is no significant race/ethnic difference in the effect of school enrollment on the risk of a non-marital birth among higher SES women, even for Black women.

Lastly, cohabitation clearly plays a very important role in the non-marital fertility of Mexican American women, as fertility within cohabiting unions is much more common among Mexican American women than White women, across all ages. However, this relationship is again largely dependent on socioeconomic status and is only significant among women of lower SES. Among lower SES women, higher levels of childbearing within cohabitation among Mexican American women in part explains the higher levels of non-marital fertility in this group. This is not true for women of higher SES. Future research certainly needs to explore more thoroughly the role that cohabitation plays in the sequencing of life course events for Mexican American women, particularly those from more disadvantaged backgrounds.

Taken together this information tells an interesting story regarding race/ethnic and socioeconomic differences in non-marital fertility. Race/ethnic differences in non-marital fertility differ by socioeconomic status, as do the effects of other variables on this relationship. A woman's schooling/employment status and cohabitation status are strongly associated with non-marital fertility, however as hypothesized, the impact of these factors varies by race/ethnicity among lower SES women but not for women of higher SES. These findings lend support to research suggesting that increased childbearing within cohabitation and a weaker schooling orientation among disadvantaged Mexican American women accounts in part for the higher non-marital fertility in this group. Among higher SES women there is no weaker schooling effect or significantly increased risk of childbearing within a cohabiting union. This suggests that perhaps these behaviors among lower SES women are an adaptive response to socioeconomic disadvantage.

These findings are interesting given East's (1998) work looking at the role of employment and educational aspirations on the expectation of marriage and childbearing. In her work, she found that high aspirations deterred the expectation of a non-marital birth among Black and White women, but not among Mexican origin women. She attributed this difference to norms among Mexican origin women that emphasized motherhood and marriage over education and occupation. However, while it is true that attitudes are very important predictors of behavior, the analyses in this chapter confirm that it is important to not discount the large role that structural

factors play in shaping women's lives (Sassler and Schoen 1999). This is particularly important in the Mexican American population. As Alvirez, Bean, and Williams stated back in 1981,

> The interpretation of Mexican American family life in terms of monolithic stereotypes implicitly assigns too great a role to the influence of cultural factors in shaping the family patterns of Mexican Americans. It invites the idea that certain patterns are derivative of beliefs and values passed from generation to generation rather than functional adaptations to a difficult environment (p. 288).

While increased fertility within cohabiting unions and a weaker job-school orientation may be interpreted as a reflection of Mexican American culture, this research suggests that these characteristics may be functional adaptations to a difficult environment. However, this begs the question as to why the functional adaptation to a difficult environment varies by race/ethnicity.

It is likely that structural and cultural factors play a role in shaping the life course trajectories of women and the relative importance of these factors likely varies by socioeconomic status. In literature which looks at the assimilation of immigrant populations into the mainstream, socioeconomic status is identified as the "key to the achievement of both cultural and structural assimilation," including family formation norms and behaviors (Alba and Nee 1997; Arias 2001). The difference in Mexican American/White non-marital fertility as well as the difference in the effect of other factors on this difference by socioeconomic status lends some support to this perspective. Despite the fact that overall race/ethnic differences are somewhat larger

among those of higher SES relative to those of lower SES, cohabitation and school enrollment operate similarly for all groups of higher SES women suggesting that these factors have a similar meaning for all women in this group.

Whether the fact that these variables operate differently for minority women of lower SES relative to minority women of higher SES is due to cultural differences that weaken with increased assimilation or is the result of differential adaptation to socioeconomic disadvantage is unknown. Nonetheless, the remaining Mexican American/White difference in the risk of a non-marital birth, among women of higher and lower socioeconomic status, leaves more to be explained. One reason for race/ethnic differences in family formation behaviors not explored in this chapter is the difference between women in the characteristics of the places they live (South 1999). The next two chapters explore whether or not the fact that minority women are disproportionately concentrated in socioeconomically disadvantaged communities explains any more of the Mexican American/White difference in non-marital fertility.

Figure 2.1: Proportion of Women not experiencing a First Premarital Birth by Age, by Race/Ethnicity

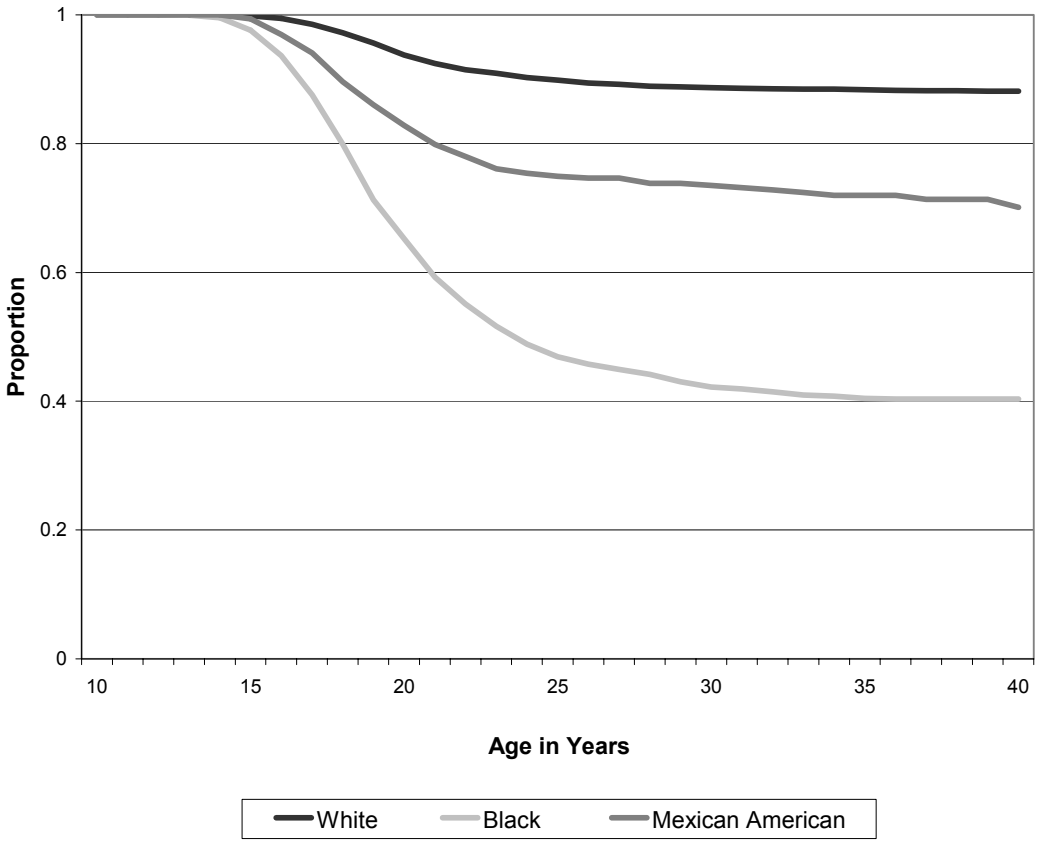

Table 2.1: Percentage of Women with First Premarital Birth by Race/ethnicity, Age, and SES

Lower SES	White	Black	Mexican American
By age 20	5.4	32.0	15.2
By age 25	12.1	54.8	26.9
By age 30	13.8	60.4	28.3
Higher SES	White	Black	Mexican American
By age 20	3.0	20.1	10.3
By age 25	6.6	41.2	17.2
By age 30	7.7	47.6	19.4

Table 2.2: Weighted Percent Distribution of Individual-Level Independent Variables by Race/Ethnicity

	White	Black	Mexican American
	%	%	%
Period			
1960-1969	37.8	32.9	23.9
1970-1979	34.8	33.6	33.0
1980-1986	19.9	23.5	30.9
1987-1995	7.5	10.1	12.2
Religion			
Mainstream Protestant	30.4	12.4	6.6
Fundamentalist Protestant	26.6	72.2	7.9
Catholic	32.4	9.2	78.9
Other Religion	10.6	6.2	6.7
Parental Education			
Less than High School	12.2	28.1	46.9
High School	42.8	40.3	28.5
Some College	16.6	13.1	13.3
College Graduate	28.3	18.1	11.1
Family Structure at Age 14			
Two parent	73.1	48.0	65.7
One parent	13.5	32.9	17.3
Step parent	11.4	12.1	12.7
Other Family Type	1.9	7.0	4.3
Mean Number of Family Transitions by age 12	0.35	0.36	0.41
Ever Cohabited before Marriage	34.6	36.0	27.3
Enrolled in High School - Age 17	93.4	91.3	87.3
Enrolled in College - Age 20	54.6	43.5	40.5
Working Full Time - Age 20	45.9	38.1	47.0
Working Part Time - Age 20	27.4	21.3	21.9

(N=9,054 Women Aged 15-44)

Table 2.3: Odds Ratios for the Logistic Regression Analysis Modeling the Effect of Background Characteristics, Employment/Enrollment, and Cohabitation on the Risk of a First Non-Marital Birth, Women Less Than 20 Years of Age

	Model 1			Model 2			Model 3		
	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Baseline Odds	0.004			0.004			0.013		
Race/Ethnicity (white)									
Black	6.79	27.76	***	4.63	19.09	***	4.60	19.11	***
Mexican American	2.98	9.07	***	2.37	6.54	***	2.25	6.15	***
Age (17-20)									
Less than 17	0.14	-28.62	***	0.13	-28.82	***	0.18	-22.32	***
Period (1960-1969)									
1970-1979	1.59	3.49	***	1.65	3.76	***	1.63	3.53	***
1980-1986	1.71	3.91	***	1.85	4.42	***	1.85	4.40	***
1987-1995	2.77	7.58	***	3.12	8.27	***	3.25	8.50	***
Family Structure at age 14 (Two parent)									
Single Parent Household				1.78	7.40	***	1.63	6.20	***
Step Parent Household				1.75	5.26	***	1.65	4.64	***
Other				1.47	2.91	**	1.23	1.56	
Number of Parental Marital/Cohab Transitions				1.00	-0.04		1.01	0.20	
Parental Education (high school graduate)									
Less than high school				1.33	3.80	***	1.25	2.92	**
Some College				0.64	-4.41	***	0.71	-3.37	***
College Graduate				0.45	-7.58	***	0.51	-6.28	***
Missing				2.53	2.16	*	2.14	1.73	^
Religion (Mainstream Protestant)									
Fundamentalist Protestant				1.28	2.58	**	1.20	1.86	^
Catholic				1.05	0.43		0.98	-0.14	
Other Religion				1.16	1.09		1.04	0.29	
Enrolled in High School							0.22	-20.28	***
Enrolled in College							0.13	-10.83	***
Employed Full-Time							0.40	-8.06	***
Employed Part-Time							0.41	-5.65	***
Cohabiting prior to birth									
Enrolled in School*Black									
Enrolled in School*Mexican American									
Cohabitation*Black									
Cohabitation*Mexican American									
-2 Log Likelihood (13213.3)	11192.30			10964.05			10489.75		
Degrees of Freedom	6			17			21		

***p<.001, **p<.01, *p<.05, ^p<.10

Analysis based on 168,593 Person Half Years

Table 2.3 (continued): Odds Ratios for the Logistic Regression Analysis Modeling the Effect of Background Characteristics, Employment/Enrollment, and Cohabitation on the Risk of a First Non-Marital Birth, Women Less Than 20 Years of Age

	Model 4			Model 5		
	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Baseline Odds	0.004			0.004		
Race/Ethnicity (white)						
Black	4.95	19.83	***	3.88	10.89	***
Mexican American	2.25	6.05	***	1.36	1.31	
Age (17-20)						
Less than 17	0.18	-21.45	***	0.18	-21.50	***
Period (1960-1969)						
1970-1979	1.60	3.51	***	1.61	3.56	***
1980-1986	1.77	4.08	***	1.77	4.09	***
1987-1995	3.04	7.99	***	3.01	7.90	***
Family Structure at age 14 (Two parent)						
Single Parent Household	1.58	5.80	***	1.53	5.43	***
Step Parent Household	1.51	3.79	***	1.48	3.60	***
Other	1.17	1.20		1.16	1.14	
Number of Parental Marital/Cohab Transitions	1.01	0.14		1.01	0.19	
Parental Education (high school graduate)						
Less than high school	1.22	2.58	**	1.23	2.69	**
Some College	0.73	-3.05	**	0.73	-2.97	**
College Graduate	0.53	-5.96	***	0.54	-5.86	***
Missing	1.43	0.80		1.54	0.97	
Religion (Mainstream Protestant)						
Fundamentalist Protestant	1.19	1.77	^	1.18	1.68	^
Catholic	0.96	-0.35		0.98	-0.18	
Other Religion	0.95	-0.38		0.92	-0.61	
Enrolled in High School	0.26	-17.35	***	0.18	-13.13	***
Enrolled in College	0.15	-10.13	***	0.10	-10.64	***
Employed Full-Time	0.38	-8.37	***	0.38	-8.58	***
Employed Part-Time	0.42	-5.45	***	0.42	-5.61	***
Cohabiting prior to birth	4.94	14.50	***	5.41	10.59	***
Enrolled in School*Black				1.73	3.61	***
Enrolled in School*Mexican American				1.79	2.12	*
Cohabitation*Black				0.51	-2.77	**
Cohabitation*Mexican American				2.37	2.69	**
-2 Log Likelihood (13213.3)	10318.59			10276.28		
Degrees of Freedom	22			26		

***p<.001, **p<.01, *p<.05, ^p<.10

Analysis based on 168,593 Person Half Years

Table 2.4: Odds Ratios for the Logistic Regression Analysis Modeling the Effect of Background Characteristics, Employment/Enrollment, and Cohabitation on the Risk of a First Non-Marital Birth, Women 20 Years of Age and Older

	Model 1			Model 2			Model 3		
	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Baseline Odds	0.01			0.01			0.02		
Race/Ethnicity (white)									
Black	5.43	23.08	***	3.69	14.40	***	3.58	14.17	***
Mexican American	2.56	6.46	***	2.26	5.21	***	2.21	5.07	***
Age (21-25)									
Greater than 25 Years	0.41	-9.44	***	0.41	-9.50	***	0.35	-10.79	***
Period (1960-1979)									
1980-1986	1.39	3.22	**	1.42	3.36	***	1.34	2.79	**
1987-1995	1.89	6.47	***	2.02	6.96	***	1.95	6.56	***
Family Structure at age 14 (Two parent)									
Single Parent Household				1.37	3.33	***	1.19	1.79	^
Step Parent Household				1.44	2.75	**	1.30	1.96	^
Other				2.05	5.15	***	2.02	4.99	***
Number of Parental Marital/Cohab Transitions				0.96	-0.74		0.96	-0.78	
Parental Education (high school graduate)									
Less than high school				1.09	0.98		0.91	0.09	
Some College				0.68	-3.56	***	0.78	-2.17	*
College Graduate				0.42	-8.06	***	0.50	-6.37	***
Missing				1.09	0.08		0.67	-0.39	
Religion (Mainstream Protestant)									
Fundamentalist Protestant				1.34	2.71	**	1.20	1.67	^
Catholic				0.99	-0.11		0.89	-1.02	
Other Religion				1.79	4.04	***	1.60	3.23	**
Graduated High School							0.47	-8.44	***
Enrolled in College							0.34	-9.83	***
Employed Full-Time							0.68	-5.07	***
Employed Part-Time							0.79	-2.13	*
Cohabiting prior to birth									
Graduated High School*Black									
Graduated High School*Mexican American									
Cohabitation*Black									
Cohabitation*Mexican American									
-2 Log Likelihood (8993.2)	8306.20			8141.29			7897.86		
Degrees of Freedom	5			16			20		

***p<.001, **p<.01, *p<.05, ^p<.10
Analysis based on 57,196 Person Half Years

Table 2.4 (continued): Odds Ratios for the Logistic Regression Analysis Modeling the Effect of Background Characteristics, Employment/Enrollment, and Cohabitation on the Risk of a First Non-Marital Birth, Women 20 Years of Age and Older

	Model 4			Model 5		
	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Baseline Odds	0.02			0.03		
Race/Ethnicity (white)						
Black	3.86	14.95	***	1.80	3.18	**
Mexican American	2.49	5.81	***	1.62	1.61	
Age (21-25)						
Greater than 25 Years	0.35	-11.03	***	0.36	-10.52	***
Period (1960-1979)						
1980-1986	1.29	2.43	*	1.24	2.04	*
1987-1995	1.86	6.08	***	1.81	5.79	***
Family Structure at age 14 (Two parent)						
Single Parent Household	1.16	1.56		1.12	1.14	
Step Parent Household	1.23	1.52		1.19	1.27	
Other	1.98	4.84	***	1.85	4.40	***
Number of Parental Marital/Cohab Transitions	0.93	-1.30		0.93	-1.16	
Parental Education (high school graduate)						
Less than high school	0.92	-0.88		0.96	-0.48	
Some College	0.79	-2.11	*	0.81	-1.91	^
College Graduate	0.52	-6.02	***	0.53	-5.74	***
Missing	0.53	-0.61		0.53	-0.62	
Religion (Mainstream Protestant)						
Fundamentalist Protestant	1.23	1.89	^	1.18	1.53	
Catholic	0.87	-1.13		0.91	-0.78	
Other Religion	1.59	3.21	**	1.48	2.69	**
Graduated High School	0.56	-6.41	***	0.29	-8.87	***
Enrolled in College	0.37	-8.90	***	0.38	-8.81	***
Employed Full-Time	0.68	-5.05	***	0.66	-5.35	***
Employed Part-Time	0.80	-2.03	*	0.79	-2.15	*
Cohabiting prior to birth	2.67	12.41	***	3.01	9.07	***
Graduated High School*Black				3.05	5.98	***
Graduated High School*Mexican American				1.17	0.50	
Cohabitation*Black				0.73	-1.90	^
Cohabitation*Mexican American				1.98	2.21	*
-2 Log Likelihood (8993.2)	7760.39			7704.41		
Degrees of Freedom	21			25		

***p<.001, **p<.01, *p<.05, ^p<.10

Analysis based on 57,196 Person Half Years

Table 2.5: Odds Ratios for the Logistic Regression Analysis Modeling the Risk of a First Non-Marital Birth, Women of Lower Socioeconomic Status

	Model 1			Model 5		
	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Baseline Odds	0.01			0.01		
Race/Ethnicity (White)						
Black	5.05	27.58	***	3.78	13.96	***
Mexican American	2.14	7.30	***	1.54	2.43	*
Age (17-20)						
Less than 17	0.14	-26.38	***	0.19	-18.61	**
Age 21-25 Years	0.75	-4.29	***	0.53	-8.76	***
Greater than 25 Years	0.31	-10.84	***	0.20	-14.23	***
Period (1960-1969)						
1970-1979	1.67	3.66	***	1.61	3.37	***
1980-1986	2.12	5.28	***	1.89	4.37	***
1987-1995	3.42	8.65	***	3.02	7.58	***
Family Structure at age 14 (Two parent)						
Single Parent Household				1.33	4.20	***
Step Parent Household				1.36	3.14	**
Other				1.24	1.98	*
Number of Parental Marital/Cohab Transitions				0.98	-0.56	
Parental Education (high school graduate)						
Less than high school				1.16	2.54	*
Missing				1.45	0.92	
Religion (Mainstream Protestant)						
Fundamentalist Protestant				1.15	1.65	
Catholic				0.84	-1.70	^
Other Religion				1.08	0.61	
Enrolled in High School				0.21	-12.31	***
Enrolled in College				0.18	-11.16	***
Employed Full-Time				0.52	-9.48	***
Employed Part-Time				0.61	-4.70	***
Cohabiting prior to birth				3.37	10.28	***
Enrolled in School*Black				1.73	4.02	***
Enrolled in School*Mexican American				1.52	1.69	^
Cohabitation*Black				0.61	-3.17	**
Cohabitation*Mexican American				2.80	4.17	***
-2 Log Likelihood (16434.637)	14218.77			13359.20		
Degrees of Freedom	8			26		

***p<.001, **p<.01, *p<.05, ^p<.10
Note: effects of race, family structure, and cohabitation vary by SES
Analysis based on 132,082 Person Half Years

Table 2.6: Odds Ratios for the Logistic Regression Analysis Modeling the Risk of a First Non-Marital Birth, Women of Higher Socioeconomic Status

	Model 1			Model 5		
	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Baseline Odds	0.002			0.004		
Race/Ethnicity (white)						
Black	6.56	0.10	***	5.27	0.17	***
Mexican American	3.07	0.21	***	1.92	0.31	*
Age (17-20)						
Less than 17	0.12	-14.13	***	0.15	-11.35	***
Age 21-25 Years	0.81	-1.92	^	0.53	-5.03	***
Greater than 25 Years	0.45	-4.66	***	0.24	-7.69	***
Period (1960-1969)						
1970-1979	1.44	1.02		1.42	0.98	
1980-1986	2.01	1.99	*	1.76	1.60	
1987-1995	3.09	3.24	**	2.73	2.86	**
Family Structure at age 14 (Two parent)						
Single Parent Household				1.53	3.27	**
Step Parent Household				1.46	2.26	*
Other				2.59	4.68	***
Number of Parental Marital/Cohab Transitions				0.94	-0.76	
Parental Education (College Degree)						
Some college				1.39	3.39	***
Religion (Mainstream Protestant)						
Fundamentalist Protestant				1.37	2.20	*
Catholic				1.23	1.42	
Other Religion				1.39	1.75	^
Enrolled in High School				0.29	-6.11	***
Enrolled in College				0.24	-7.35	***
Employed Full-Time				0.62	-3.83	***
Employed Part-Time				0.63	-2.89	**
Cohabiting prior to birth				4.80	9.36	***
Enrolled in School*Black				1.21	0.91	
Enrolled in School*Mexican American				1.83	1.41	
Cohabitation*Black				0.72	-1.25	
Cohabitation*Mexican American				1.29	0.22	
-2 Log Likelihood (5819.7)	5051.30			4721.50		
Degrees of Freedom	8			25		

***p<.001, **p<.01, *p<.05, ^p<.10

Note: effects of race, family structure, and cohabitation vary by SES

Analysis based on 93,707 Person Half Years

Chapter 3: Race/ethnic differences in non-marital fertility: instrumental mechanisms

3.1 Introduction

Empirical research documents that poor neighborhoods or poor communities have an independent effect on the outcomes of individuals above their own personal and family characteristics (Tienda 1991). Concentrated urban poverty is linked to high rates of joblessness, educational failure, and welfare dependence among African Americans (Massey and Denton 1993; Wilson 1987; Wilson 1996). Regarding processes of family formation, poor communities are characterized by higher levels of teenage pregnancy, out-of-wedlock childbearing, separation and divorce, and lower levels of marriage than are non-poor communities (Jargowsky 1997; Massey and Denton 1993; Wilson 1987; Small and Newman 2001; Kingsley and Pettit 2003). These associations have raised at least two broad questions. First, what factors contribute to the creation of poor communities? Second, why are individuals in poor communities at a higher risk of the above outcomes?

Since the 1960's there has been a debate in the literature as to whether community level poverty is a result of the "people who live there", a "ghetto culture", or the result of broader economic change and residential segregation that limits individual opportunity within these communities (Jargowsky 1997; Moore and Pinderhughes 1993). In 1987's *The Truly Disadvantaged* (which focuses in particular

on disadvantaged Black communities in the Midwest), Wilson argued for the latter, suggesting that economic restructuring was critical to the growth in inner city poverty. This theory of poverty is a largely class based theory which argues that the transformation in urban economies led to a decline in jobs for men with lower skill and education (despite increases in educational attainment). Additionally, jobs moved out of urban centers and people who were eligible for those jobs followed. Thus the middle and working class left the inner cities taking with them money for social services, schools, churches, stores, etc. This resulted in a concentration of people and families with a lack of economic resources in communities with a lack of opportunities, what Wilson then called the 'underclass'. Empirical research has lent support to this argument. In his work which looks at the determinants of "ghetto poverty" (defined as census tracts with poverty levels of 40% and greater) between 1970 and 1990, Jargowsky (1997) finds that changes in the overall local opportunity structure, as measured by the mean income of all metropolitan residents, accounts for about 4/5th's of the variance in community poverty. He argues that culture or values of "ghetto" residents at best play a secondary role.

This perspective argues that a positive change in the local economy would benefit the residents of high poverty areas. Recent research looking at changes in community poverty since 1990 suggests that this is indeed the case. Kingsley and Pettit (2003) find that a large number of census tracts move in and out of high poverty status each decade, these shifts are accompanied by shifts in the well-being of

residents in these areas as indicated by the proportion of the population with a high school diploma, who graduated from college, who were employed, received public assistance, and the proportion of families with children headed by single mothers.

So, how does community context impact individual behavior? While the terminology has varied over time, research on urban poverty and the family generally focuses on two sets of mechanisms linking context to individual behavior, *instrumental mechanisms* which describe how individual agency is limited by neighborhood opportunity and *socialization mechanisms* which describe how neighborhoods socialize those who grow up or live in them (Small and Newman 2001; Billy, Brewster and Grady 1994; Wilson 1987).

Much of the recent research looking at marriage and non-marital fertility has focused on the role of the instrumental mechanisms, or the structural and economic factors, that serve to limit individual level opportunity (Lichter et al. 1992; South and Lloyd 1992a; South and Lloyd 1992b; South 1996; Lloyd and South 1992). Some of this research, in response to the low rates of marriage and high rates of non-marital fertility among the Black urban poor, focuses on the impact that neighborhood disadvantage has on the availability of "marriageable men." Other research focuses on the limited availability and quality of employment and educational opportunities for men and women in these disadvantaged communities. It is important to note that in this body of work, socialization mechanisms remain a critical component of explanations linking context to marriage and non-marital fertility. For example, some

research suggests that a lack of role models in these disadvantaged communities results in a weakening of traditional norms surrounding the work and fertility decisions of men and women, beyond the change in norms that society as a whole has experienced. However, this work tends to view socialization mechanisms as mediators in the broader relationship between the instrumental mechanisms and individual behavior (Wilson 1987; Billy, Brewster and Grady 1992; Brewster 1994b).

Research looking at the relationship between urban poverty and the family has focused primarily on Black/White differences in family formation behaviors; less research has looked at other groups. As stated in Chapter 1, the lack of research among Mexican Americans is somewhat surprising given the size and growth of this population in the U.S. and their relatively high levels of non-marital fertility. In fact, Small and Newman (2001) in their review of research on urban poverty, the family, and the neighborhood, specifically call for more comparative work that looks at the rate of out-of -wedlock births among Latina women. This is of particular concern as all poor persons, including Hispanics, have become increasingly concentrated in high poverty areas (though this declined somewhat in the 1990's) and mid poverty areas (especially between 1990-2000) (Kingsley and Pettit 2003; Jargowsky 1997). In 1990 the Mexican origin population comprised 14% of the population of high poverty areas, but only 5% of the overall national population. While there was increased concentration of poverty among Whites as well as minorities, minority families and

children are overrepresented in high poverty areas relative to White families and children (Jargowsky 1997).

This chapter explores the role the first set of mechanisms discussed above, the instrumental mechanisms, play in linking community context to non-marital fertility. It explores whether these macro structural and economic factors help explain race/ethnic differences, in particular Mexican American/White differences, in the non-marital fertility rate. Again, though the non-marital fertility behavior of immigrants is in itself interesting and offers important information about how immigrant groups adapt over time, this chapter focuses on U.S. born Mexican Americans and the 1.5 generation (those who migrated to the U.S. before age 12). This limits the likelihood that race/ethnic differences in non-marital fertility will be associated with the immigration experience itself (Stephen and Bean 1992; Oropesa, Lichter, and Anderson 1994; Bean, Swicegood, and Berg 2000).

3.2 Background

3.2.1 Instrumental Mechanisms and Non-Marital Fertility

Research linking instrumental mechanisms to family formation behavior has drawn primarily from two perspectives. The first emphasizes differences in non-marital fertility due to lower levels of male labor force attachment in high poverty neighborhoods which in turn results in low rates of marriage (Wilson 1987; South and Lloyd 1992a, South 1996). Women in these neighborhoods, disproportionately of

minority status, spend a greater period of time at risk of a non-marital birth. The second perspective focuses more specifically on the characteristics of women. This research explores the impact that instrumental mechanisms have on the sequencing of family formation behaviors of women such as childbearing, marriage, and divorce (Brewster 1994a; Brewster 1994b; Billy and Moore 1992; South 1996). It suggests that contextual characteristics help shape the pathways through which young women are able to transition to adult status (Luker 1996; Brewster 1994a, Brewster 1994b). I elaborate on these two perspectives below.

The first perspective draws largely from the work of Wilson (1987) which argues that increased non-marital fertility is a result of declines in marriage, which in turn, is due to the concentrated urban poverty of Blacks, discussed above. The "underclass", more recently called the "ghetto poor", is characterized by single parent families, welfare dependency, joblessness, and increased 'social pathologies' (Wilson 1987; Van Haitsma 1989). A critical characteristic of this group is the scarcity of "marriageable men," or men with characteristics conducive to marriage such as stable employment and steady income. Wilson (1987) argues that declining economic opportunities in the inner city not only reduced the pool of men with steady jobs but also contributed to the isolation of the poor from the middle class. This led to the corresponding isolation of men from role models, resources, and job networks that would increase employment opportunities (Small and Newman 2001). As a result

young men are not interested in marriage, as they do not earn enough to sufficiently support a family.

This theory suggests that disadvantaged communities characterized by a dearth of "marriageable men" should have decreased local marriage rates. Though results vary somewhat, research has generally found that differences in the availability of "marriageable men" do account for some of the Black/White difference in marriage (Lichter et al. 1991, Lichter et al. 1992, South and Lloyd 1992b).

It is perhaps less clear how a dearth of marriageable men impacts non-marital fertility rates. However, this may occur in two ways. First, to the extent that the availability of marriageable men is related to marriage, a dearth of men may decrease the likelihood that a premaritally pregnant woman will marry, increasing the non-marital fertility rate. In his ethnographic research, Anderson (1990) describes an environment where Black men are not interested in marriage as they are unable to earn an income to support a family, yet seek out sexual encounters and fatherhood as a way to gain status. Lending some empirical support to this observation, Ku, Sonenstein and Pleck (1993) find that both White and Black men who live in communities with high levels of unemployment have a higher risk of unwed fatherhood. Secondly, it is possible that a woman who perceives a lack of potential mates may choose not to wait for marriage, since it is less likely to happen, and choose to bear a child outside of marriage. Pregnancy and childbearing provide women a route to adult status in an environment where marriage is unlikely

(Anderson 1990). Conversely, a woman in a community with a surfeit of "marriageable men" may be more likely to wait until marriage to have a child, as there is a greater overall chance of marriage. If this is the case, women in communities with more "marriageable men" will have a lower risk of a premarital birth.

There are two components to Wilson's concept of "marriageable men". The first reflects the actual number of men relative to women while the second reflects the employment status of these men. South and Lloyd (1992b) find modest effects of mate availability, measured as the number of men relative to women, on non-marital fertility rates, such that a decreased availability of men increases the non-marital fertility rate. They argue that one reason why this effect is small is that it is actually comprised of two countervailing forces. While the increased number of men may increase the legitimation of unwed pregnancies, it is possible that more men may also increase the risk of premarital sex and thus, of premarital childbearing. Indeed, Billy and Moore (1991) do find positive effects of the sex ratio on the risk of adolescent premarital sex. South (1996: p. 266) additionally argues that an abundance of mates "might also reduce the costs of non-marital fertility". Costs may be reduced because women who get pregnant and have a child prior to marriage may not face as many disadvantages in marriage opportunities when there are a large number of possible partners. In his 1996 study, he finds that the sex ratio has a small positive impact on the non-marital fertility rate, at least among White women. Therefore, it must be kept

in mind that a measure of "marriageable men", which includes the employment status of the men, may also reflect countervailing effects. While high levels of male unemployment may discourage marriage and increase non-marital fertility, a large number of men relative to women may also increase the risk of a non-marital birth.

High poverty neighborhoods are generally characterized by low labor force attachment among men (Wilson 1987; Van Haitsma 1989), and unemployment is what makes these men unattractive marriage partners. However joblessness among Mexican origin men is actually quite low; it is underemployment that is high, accompanied by low earnings (Bureau of Labor Statistics 2001; DeAnda 1994). Underemployment includes partial, intermittent, and inadequate employment and as a result underemployed men do not receive the same benefits or income as full time employed men. DeAnda (1994) finds that there are twice as many underemployed Mexican origin men as there are White men, concentrated particularly among the young and poorly educated. Persistent poverty and discriminatory migration and labor force practices faced by the Mexican origin population throughout the past century have contributed to this situation. So, though the pattern is somewhat different for Black and Mexican origin men, both groups are disadvantaged in the labor market in a way that might discourage marriage. In fact, Forste and Tienda (1996) find that Mexican origin women are more likely to attribute declines in marriage and increases in non-marital fertility to declining economic opportunities than to changes in the value of marriage as an institution.

The second perspective focuses more specifically on the characteristics of women. This research explores the impact of community level economic and structural factors on the sequencing of marriage and fertility among women, or on factors that impact that sequencing (Brewster 1994a; Billy and Moore 1992; South 1996). A popular explanation for family change, including increased non-marital fertility, in the last half-century is the changing economic and educational opportunity structure for women. The women's economic independence hypothesis suggests that due to increased participation and wages in the labor force women are choosing to forego (or at least delay) marriage (Cherlin 1992; Jargowsky 1997; Ruggles 1997). One result is that women of childbearing age are at an increased risk of non-marital births due to the increased time spent in an unmarried state. Yet, this explanation has received little empirical support in the literature and is unlikely to explain race/ethnic differences in marriage (or non-marital fertility), as it is not women with the greater economic opportunities who are having the non-marital births. In fact, research finds that women with higher earnings and better employment are ultimately more likely to marry than those with less earnings and less stable employment (Lichter et al. 1992; Oppenheimer 1994). It is likely that employment and the associated earnings actually make the woman a more attractive marriage partner (South 1991).

An alternative perspective suggests that increased neighborhood disadvantage may impose structural constraints limiting women's educational and economic opportunities in communities, impacting the rate of births to unmarried women

(Brewster 1994a; Brewster 1994b; Van Haitsma 1989; Hogan and Kitagawa 1985). Becoming a parent has traditionally been one of the most important transitions of young adulthood (Rindfuss, Morgan, and Swicegood 1988). However, among the middles class, two important normative constraints have been imposed on this event (Jencks 1992; Erickson 1998). First, childbearing should occur in the twenties and second, it should occur within marriage. This ordering and timing of events suggests that women should first complete their education, attain a good job, marry, and then have a child. However this ordering of events varies by race/ethnicity and socioeconomic status. Women who live in disadvantaged communities are faced with very real structural constraints, such as limited educational and employment opportunities, which may encourage women to choose alternate pathways to adulthood. Brewster (1994b: 410), adopting this perspective argues that,

> In communities that do not provide teens with the resources necessary for educational and occupational attainment or contact with adults who exemplify the behaviors and values associated with conventional models of social and economic success, young women may judge the negative consequences of sexual activity {such as a non-marital birth} to be remote or unimportant relative to its immediate benefits as an affirmation of adulthood. However, where the social and economic resources necessary for the attainment of desired adult statuses are available to adolescents, these consequences may appear less problematic.

Brewster (1994b) finds that controlling for neighborhood differences in the labor market experiences of women do reduce the Black/White differences in age at first sex. Abma and Krivo (1991) also find some evidence that among Mexican origin women, community level economic constraints are associated with higher levels of

overall fertility, particularly for women under 30. This perspective is further supported in ethnographic research that looks specifically at Chicana adolescents in southern California. Dietrich (1998) finds that while virginity followed by having children within a marriage is the socially expected norm, many young women have children outside of marriage in an attempt to achieve emancipation from their families and to achieve adult status. "For the majority of the girls in the varrio, motherhood is perceived as a sign of adulthood…Some girls consider motherhood as the only desirable career path available to them" (p. 73), when their alternative is no employment, or at best low skill, low paying jobs. This suggests that Mexican American/White differences in non-marital fertility may be associated with differences in community level educational and employment opportunities for women. Women who live in communities with a lack of economic and/or educational resources, limiting their ability to follow the normatively proscribed path to adulthood, may choose alternate routes to adulthood, including parenthood outside of marriage.

Because Mexican Americans tend to live in more disadvantaged communities characterized by less stable employment histories than Whites, I expect that differences in the *availability of marriageable men* will explain some of the race/ethnic difference in non-marital fertility rates. Additionally, higher levels of non-marital fertility among Mexican American relative to White women may be partly due to the extent that Mexican American women live in neighborhoods characterized

by a lack of *economic opportunities* for women. These observations motivate the first two research questions addressed in this chapter:

Q1. *To what extent are differences in the non-marital fertility rate among Blacks, Mexican Americans and Whites attributable to contextual level differences in the availability of marriageable men?*

Q2: *To what extent are differences in the non-marital fertility rate among Blacks, Mexican Americans and Whites attributable to contextual level differences in the economic opportunity structure for women?*

3.2.2 Community Context - Hispanics

The questions above are motivated by theories that have generally focused on the effects of concentrated urban poverty on the family formation patterns of African Americans. However the experience of Hispanic populations within the U.S. is clearly distinct from that of Blacks and thus there is some question in the literature regarding whether or not these theories can be applied to Hispanics (Moore and Pinderhughes 1993). Moore and Pinderhughes (1993), and the contributing authors to the volume they edit, suggest that economic restructuring, residential stability, and immigration/concentration effects may lead to different expectations regarding the relationship between social context and individual behavior among Hispanic populations.

Moore and Pinderhughes (1993) argue that economic restructuring has affected Hispanic communities differently than Black communities, and this has depended largely on the location of the community within the U.S. Deindustrialization can not happen where there was never industrialization to begin with. Nonetheless, they argue that restructuring has affected Hispanics. In particular, they have been affected by the growth in the service sector, which has accompanied the decline in traditional manufacturing. As mentioned above, despite a strong attachment to the labor market, research has documented that many poor Hispanics are working in low paying service jobs or in the informal sector where wages are especially low and work may be intermittent. It may be that in the case of Mexican Americans male full time labor force participation rates, rather than measures of labor force detachment, have a stronger impact on the risk of a non-marital birth as a woman judges her potential mates on stable employment rather than any employment.

Some of the Mexican origin communities, such as the border towns in Texas and Albuquerque, are characterized by relatively high levels of residential stability, in contrast to the middle class flight in urban Black communities discussed by Wilson (1987). This stability is argued to anchor a sense of community within the disadvantaged and promote strong ties of ethnic culture and family relations (Gonzales 1993; Valdez 1993). This argument ties in to a broader literature linking residential instability to problem behaviors among children and adolescents (Brooks-

Gunn et al. 1997). Thus, it is expected that areas with higher residential stability will have lower levels of non-marital fertility, particularly for Mexican Americans.

Immigration also plays a prominent role in shaping the local community, though it may have somewhat countervailing effects. It has been argued that immigration has changed the economic opportunities for Mexican Americans, with immigrants offering direct competition for jobs at wages unacceptable to native-born Mexican Americans (Moore and Pinderhughes 1993; Moore and Vigil 1993; Valdez 1993). This may drive down the employment opportunities for native-born men and women, thereby increasing the risk of a non-marital birth among Mexican American women. At the same time it has been argued that a high level of immigration, even into poor largely minority neighborhoods, fosters a strong sense of community and promotes businesses and economic opportunity for the residents in these neighborhoods (Rodriguez 1993). In contrast to the detrimental "social isolation" experienced by African Americans in poor neighborhoods, these communities may actually be economically and socially vital despite their poverty. This perspective suggests that high levels of immigration will protect Mexican Americans against some of the deleterious outcomes associated with community disadvantage.

These three factors are expected to be more important for Mexican Americans than for non-Hispanic Whites or Blacks. This discussion motivates additional research questions that will be addressed in this chapter:

Q3: To what extent do differences in rates of male full time employment, residential stability, and the concentration of immigrants explain differences in the non-marital fertility rates between Mexican Americans and Whites in particular?

Up to this point the discussion has emphasized how community context may impact non-marital fertility, how the overrepresentation of minority women in these disadvantaged communities may account for some of the race/ethnic difference in non-marital fertility, and how Mexican American non-marital fertility may be additionally impacted by the levels of male underemployment, immigration, and residential stability in a community. However, one important implication of Wilson's argument is that there exists an interaction between context and individual level disadvantage, such that a poor woman will fare much worse in a high poverty neighborhood than a poor woman in a low poverty neighborhood (Wilson 1987; Small and Newman 2001; Jencks 1992). Wilson (1987) argues that these concentration effects will increase the likelihood of being unemployed and becoming a parent out-of-wedlock, among other things. Additionally, it may be the case that women with more individual and familial resources will be less influenced by the characteristics of where she lives, or more able to protect herself against community disadvantage (Sucoff and Upchurch 1998). Because minority women are more likely to experience socioeconomic disadvantage and to reside in disadvantaged areas, controlling for this interaction may reduce race/ethnic differences in non-marital fertility rates. As a result, I explore whether or not the effects of community level

characteristics vary by individual socioeconomic status. I do this in two ways. First, I explore individual interaction terms for each of the community level characteristics across individual socioeconomic status. Secondly, I look at the above research questions separately by socioeconomic status.

3.2.3 Spatial Scale

One of the unanswered questions in research looking at the relationship between community level factors and individual level outcomes is at what spatial scale community context should be measured (Teachman and Crowder 2002; Sampson et al. 2003; Dreier et al. 2001). Guided by theory and often restricted by data, research has conceptualized community at a variety of different levels, including the census tract, county, state, Labor Market Area, and Metropolitan Statistical Area. While there are strengths and weaknesses associated with each level of measurement, one drawback is that in any one study community is usually measured at only one of these levels, though individuals live and interact within many contexts simultaneously (Billy, Brewster, and Grady 1994; Sampson et al. 2003). Billy, Brewster, and Grady (1994: p.985) argue that,

> Norms pertaining to reproductive decisions are more likely to be generated by the properties of neighborhoods, which are relatively homogenous, than by those of larger areal units. The essential features of a norm is that it is accompanied by positive and negative sanctions, and we might expect the sanctions to be much more effective when levied by persons within the individual's daily environment…Labor force opportunities pertain to areal units larger than neighborhoods but smaller than states, since these boundaries generally define the distance most people are willing to travel for work.

Because this particular chapter focuses on marriage markets and the economic opportunities available to women in their communities (instrumental mechanisms), I measure context only at the county level. This unit fits within the definition given above and is broad enough to encompass marriage markets and labor markets. Perhaps one concern in the use of counties as the second level unit is that they are too large and may underestimate contextual level effects. Counties obviously incorporate a wide range of neighborhoods and thus socioeconomic contexts. However, regional inequality exists as well. As Dreier et al. (2003) document, regional incomes have diverged since the 1980's. They found that the richest states have done better while the poorer states have fallen further behind, and this trend is similar "whether one examines data for individual metropolitan areas or groups them into broader regions" (p. 34). In fact, Jencks (1992) argues that it is important to look at the economy as a whole and not just the economies of central cities. Counties incorporate the urban and suburban economies that Jencks identifies as important.

In summary, this chapter looks closely at the relationship between the structural/economic characteristics of counties and overall levels of non-marital fertility, paying particular attention to the non-marital fertility of Mexican American women. Does the fact that Mexican American women live disproportionately in disadvantaged counties contribute to higher non-marital fertility relative to White women? In addition to the availability of marriageable men and the opportunity structure available to women, this chapter explores the role of male full time

employment, immigration, and residential stability on race/ethnic differences in non-marital fertility, characteristics identified as particularly important for Hispanic populations. Lastly, this analysis specifically explores Wilson's claim that poor women fare particularly poorly in disadvantaged areas.

3.3 Data and Methods

The individual-level data for the analysis in this chapter come from the 1995 wave of the National Survey of Family Growth (NSFG), discussed in the last chapter. The NSFG also collected information on respondent's residence history between 1990 and the 1995 interview. By combining this information with census data and other sources NCHS has constructed a supplementary data set, the NSFG-CDF, which includes information aggregated at the county, census tract, and block group level. Importantly, these data are linked to the respondent's residence in 1990, 1993, and 1995, which allows for the construction of time-varying contextual variables. Because this information is only collected from 1990 onwards, the analyses are restricted to women who experienced time at risk of a non-marital birth since 1985. Additionally, women who do not have a county identifier are removed from the sample[11]. Thus, for this set of analyses, the sample is comprised of 4,733 women: 3,172 non-Hispanic Whites, 1,193 non-Hispanic Blacks, and 368 Mexican Americans. To measure the non-marital fertility rate, a person half-year file is created in which observations are censored at first premarital birth, marriage, or date of

[11] 304 women were missing county identifiers, roughly 6% of the eligible women. This does not vary significantly by race/ethnicity.

interview. This sample consists of 64,811 person half-years contributed by the women. A dichotomous variable is created that takes on a value of 1 if a first premarital birth occurred within that six-month period.

Race/ethnicity is represented by three dummy variables: non-Hispanic White, non-Hispanic Black, and Mexican American, including both U.S. born Mexican origin women and those who immigrated to the U.S. before age 12 (the 1.5 generation). Again, in this chapter the native born and 1.5 generation Mexican origin women are placed in the same category[12]. Though the primary interest in this study is in the role that contextual level variables play in race/ethnic differences in non-marital fertility rates, other individual and family level variables are associated with non-marital fertility as well as race/ethnicity and are included in the models as controls. The retrospective data allows for these control variables to be measured throughout each woman's life at six month intervals, thus while some variables will remain constant across the life course, others will be allowed to vary as they change. Based on the previous chapter I control for religious background, cohabitational status, school enrollment, full time and part time employment, parental education, and family structure[13].

[12] Preliminary analyses (not shown) demonstrated that explanatory variables worked similarly for these two groups and keeping them separate did nothing to improve the fit of the models.

[13] Controlling for parental education and family structure is particularly important because of endogeneity issues, one of the primary concerns in research on neighborhood or community effects (Tienda 1991; Jargowsky 1997; Sampson et al. 2003). There is a concern that individual differences in an outcome attributed to neighborhood or community effects may be overstated to the extent that these differences are really due to the selection of individuals and their families into these neighborhoods. Controlling for family background and parental education begins to address some of this problem,

3.3.1 County Level Measures

Two sets of variables are included in the analyses that attempt to measure economic/structural opportunity for men and women. The first set measures the marriage market, or the availability of marriageable men to women in a county. These variables have been linked not only to transitions to marriage, but have also been implicated in differences in non-marital fertility rates. The second set of variables attempts to measure the employment opportunities available to women in a community. This may signify the availability of alternate routes to adulthood for younger women, delaying fertility. A third set of variables measures the contextual characteristics Moore and Pinderhughes (1993) identified as particularly important to Hispanic populations. These variables are listed in Table 3.1.

Many studies have looked at the relationship between the sex ratio and family formation behaviors (Fossett and Kiecolt 1991; Lichter et al. 1991; Lichter et al.1992; South and Lloyd 1992b; South 1996). Generally, the sex ratio measures the proportion of men to women within a certain geographical area. Interestingly, there has been little consensus in the literature as to what restrictions the sex ratio should include, such as those based on age, race/ethnicity, labor force status, earnings,

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though does not entirely take care of the possible selection problem. However, two things should be kept in mind. First, recent research using an experimental design has found a reduction in poor health outcomes and problem behaviors and an increase in general wellbeing for families who moved from low income to higher income areas (reviewed in Sampson et al. 2003 and Jargowsky 1997). Secondly, as Sampson et al. (2003: p. 469) argue, it is possible to overcontrol for individual, familial, peer, and school factors such that "models that estimate the direct effect of current neighborhood context on a particular outcome may be partitioning out relevant variance in a host of mediating and developmental pathways of influence."

employment, education, or marital status. In this analysis I employ three variations of the sex ratio, an approach guided by Fossett and Kiecolt (1991: p.954), who suggest that this is appropriate when "a single best measure is not dictated by theory." Despite the lack of consensus concerning the measurement of the sex ratio, research has identified several factors that should be taken into consideration when interested specifically in the relationship between the sex ratio and family formation behaviors.

First, some sort of age restriction must be placed on the sex ratio. It is important to remove the influence of the young and the older populations, as they will bias the sex ratio due to differential mortality between men and women. Additionally, because people tend to choose mates similar in age to themselves, some researchers compute sex ratios based on narrow age ranges. Yet, Fossett and Kiecolt (1991) find that sex ratios based on a broader age range, between 15-44 for example, are comparable to those based on narrow age ranges and may in fact be preferable. Secondly, race/ethnic specific sex ratios are constructed among groups that have low rates of exogamy, for example Blacks and Whites. Whether this practice should be employed for groups such as the Mexican origin population is less clear as they have higher levels of exogamy. Lastly, and arguably most important, is the need to place restrictions on the sex ratio based on the labor force participation of men. Fossett and Kiecolt (1991) find that sex ratios that include institutionalized men are much less strongly correlated with family formation measures (such as percent married and percent of non-marital births among women) than sex ratios that include only men

currently in the labor force. In fact, this criterion is critical to the construction of Wilson's (1987) measure of marriageable men.

The first sex ratio I use employs these three defining criteria. Specifically, I use the race/ethnic specific sex ratio of employed men aged 15-44. However, as discussed above, Mexican American men actually have low levels of unemployment; it is earnings that are quite low. As a result, I additionally use the overall sex ratio of men aged 15-44 with adequate earnings. Adequate earnings are identified as earnings of at least 185% of the poverty rate. Lastly, I use the overall sex ratio of unmarried men aged 15-44. Though Fossett and Kiecolt (1991) find that sex ratios based on the unmarried population do not differ much from those based on the whole population, some argue that is inappropriate to include individuals who are not actively in the marriage market. These last two measures are not race/ethnic specific, and the last one does not include restrictions based on labor market characteristics.[14] So, while the first two are measures of "marriageable men", the last is actually a measure of the sheer number of men relative to the number of women. Each of these three measures is logged when included in the analysis. This centers the sex ratio at the value of 0. Additionally, this gives symmetry to the measure so that negative and positive sex ratios have equal strength when included in the model. Prior to logging, a sex ratio is bounded by 0 and infinity; logged, the sex ratio is bounded by negative infinity and positive infinity.

[14] The NSFG-CDF does not allow for these restrictions to be placed on these variants of the sex ratio.

The second set of variables attempts to measure the economic/labor force opportunities available to women in a county. While many researchers measure female employment opportunity in an area by looking at the proportion of women in an area that is employed, this may inadequately measure opportunity. Rates of female employment increased over the latter part of the twentieth century, yet many women are not in 'career' jobs, but are in jobs with little opportunity for upward mobility (Sweet 1981). Sweet (1981) argues that is important to distinguish between the quantity of jobs available to women and the quality of these jobs. In the case where we are interested in whether female job opportunities provide an alternate route to adulthood for women, the quality of jobs available to them may be quite important.

A woman's decision to enter the labor force will be the result of a combination of individual, family, and larger socioeconomic factors. In this chapter I use several measures to tap at labor market opportunities for women. The measures I choose are largely based on the work of Deseran, Li, and Wojtkiewicz (1991) who look at the role the relationship between local labor markets and women's full time labor force participation. I focus most closely on two of their measures, the economic vitality of an area and the industrial composition of an area. Economic vitality, indicating increased opportunities for all people, is positively related to the employment possibilities of women because "expansions in the economy have disproportionately benefited those at the bottom of the employment queue" (p. 8). Measures of the economic vitality of an area looked at in this analysis are the overall

unemployment rate, the race/ethnic specific unemployment rate, and the female labor force opportunity index, a measure constructed by the NSFG. This measure indicates the expected number of jobs for female workers relative to the potential supply of female workers. A higher score indicates more employment opportunities for women.

The industrial composition in an area also impacts women's employment. Several measures will be used to measure the industrial composition, or the quality of employment available to women, in a county. Deseran et al. (1991) find that the proportion of people employed in manufacturing is positively related to women's labor force participation. Additionally, Landale and Lichter (1997) find that a higher proportion of the population involved in manufacturing is negatively associated with poverty among children. Based on this work, the analyses include a measure of the proportion employed in manufacturing. Two additional measures developed by McLaughlin et al. (1999) are used to tap at the quality of employment opportunities for women within each county. These two measures are the proportion of jobs in the county that are high quality jobs for women and the proportion that are low quality jobs for women. McLaughlin et al. (1999) develop a classification of industries that characterizes jobs as poor quality, mid quality, or high quality for women. In this case poor quality jobs for women are those in agriculture, the retail trade, personal services, business and repair services, and entertainment and recreation services. High quality jobs are those in transportation, communications and utilities, public administration, and professional services. It is expected that the greater the proportion

of high quality jobs in a community will lower the non-marital fertility rate. Conversely, lower skill jobs may be less of a deterrent to childbearing than are higher skill jobs, and thus the greater the proportion of low quality jobs in a community the higher the non-marital fertility rate. In addition to an area's economic vitality and industrial structure, a measure of the urban/rural status of the county will tap into geographic factors associated with female labor force participation.

A last set of variables will measure the characteristics identified by the research in the Pinderhughes and Moore (1993) volume as particularly relevant for the Mexican origin population. The rate of male full time employment measures the intermittency of work available to men in each county. Residential stability is measured as the proportion of county residents who lived in the same county five years ago. And lastly, the proportion of county residents who are immigrants is used to measure the effect of immigration in a community.

3.3.2 Statistical Analyses

The statistical models used in this analysis are constructed to explore the primary question in this chapter, which is whether county level characteristics mediate the race/ethnic effect on non-marital fertility, independent of individual level characteristics. In this analysis there are expected to be at least two levels of variation in the dependent variable; variation at the individual level due to a woman's own characteristics as well as her family background and variation at the county level due to differences in structural/economic opportunities for men and women. To the extent

that unmeasured county characteristics (error) exert an influence on individual behavior, individuals within a county may be more similar to one another than to women in another county. If this is the case then the error terms are no longer independent and standard errors may be underestimated while the significance of parameter estimates may be overstated. Multilevel models are designed to deal with this non-independence of error terms, resulting in more accurate estimates of model error and statistical significance. A multilevel modeling approach has the added benefit of allowing one to determine how similar individuals who live in the same county are. County level variables are expected to not only help explain race/ethnic differences in non-marital fertility, but are also expected to reduce the overall county level variance in non-marital fertility rates.

Though they can be represented in one equation, multilevel models are more easily thought of as a system of equations, one for each level of analysis (Teachman and Crowder 2002; Mosher et al. 2003; Raudenbusch and Bryk 2002). Y^*_{ij} is the propensity of a non-marital birth measured for the i^{th} individual in the j^{th} county. Assuming for now just one individual level independent variable, an equation at the individual level can be written as follows:

$$Y^*_{ij} = B_{0j} + B_{1j}X_{1ij},$$

where B_{0j} is the intercept and B_{1j} represents the impact of that independent variable in the j^{th} county. However, a neighborhood characteristic, Z_{1j}, can affect B_{0j} (the

intercept) and/or B_{1j} (the slope). These second level equations can be written as follows:

$$B_{0j} = a_{00} + a_{01}Z_{1j} + u_{0j},$$

$$B_{1j} = a_{10} + a_{11}Z_{1j} + u_{1j}.$$

In this case, a_{00} and a_{10} are intercepts, a_{01} and a_{11} are regression parameters measuring the impact of the neighborhood characteristic, and u_{0j} and u_{1j} are residuals. The majority of my analysis incorporates the first and second equations, which when combined, estimate a random intercept model. In this model, a_{01} represents the additive effect of the neighborhood characteristic, Z_{1j}, on the likelihood of a non-marital birth. Additionally, the model I use only allows the intercept to vary across contexts, other individual level covariates are not allowed to vary (so, B_{1j} is now B_1). Models that incorporate the third equation allow the county characteristics to impact the effect of individual level covariates and are known as random slope models (in effect measuring a cross-level interaction, where individual level effects can vary across counties).

Because the dependent variable is dichotomous, a further refinement to the multilevel equation described above is required. On the left side of the equation we replace Y^*_{ij} with logit[$Pr(Y_{ij} = 1)$], since Y_{ij} takes on one of two discrete values:

Y_{ij} = 1 if person year i in community j experiences a non-marital birth

0 otherwise.

The right side of the equation contains the familiar linear model:

$$\text{logit}[\Pr(Y_{ij} = 1)] = B_{0j} + B_{1j}X_{1ij.}$$

The second level equation is written as before:

$$B_{0j} = a_{00} + a_{01}Z_{1j} + u_{0j},$$

The level-1 equation does not contain an error term. This is because the error variance is now assumed to follow a standard logistic distribution with a mean 0 and variance $\pi^2/3$. The level two error variance, u_{0j}, on the other hand, is similar to the error term in most linear models (it is assumed to be normally distributed with a mean of zero and independently estimated variance).

For the analyses discrete-time event history models predicting non-marital fertility rates are estimated using logistic regression (Allison 1984; Yamaguchi 1991). The models are set up to allow a half-year lag between the time-varying explanatory variables and the dependent variable. So, the models predict the odds of a first non-marital birth within the next half-year, controlling for characteristics within the current half-year. All of the analyses in this chapter are conducted using multilevel procedures in SAS, specifically the GLIMMIX macro.[15]

[15] GLIMMIX is a SAS macro that iteratively calls PROC MIXED to solve generalized linear mixed models. It uses restricted/residual pseudo likelihood (REPL) to find these parameter estimates.

I first run unconditional multilevel models to partition the variance in the risk of a non-marital first birth into individual and county level components. I next include individual and family level variables and specifically examine whether there are reductions in race/ethnic differences in the odds of a non-marital birth with their inclusion. I then progressively adjust the baseline race/ethnic model (no other level 1 characteristics) for specific county level measures, measuring opportunity for men and women. These models provide descriptive information on the relationship between each of the county level variables and the non-marital fertility rate. Additionally, these variables are expected to modify the effect of race/ethnicity on non-marital fertility. Level 1 characteristics are then included in these models in order to determine which county level variables maintain an independent relationship with non-marital fertility. Though not the fundamental question of this chapter, one can also determine which county level variables reduce the overall second level variance. Lastly, I conduct a series of analyses that look at the interaction between individual socioeconomic status and county level disadvantage. For ease of interpretation, models are run separately for women of higher socioeconomic status (women with at least one parent with at least some college) and lower socioeconomic status (women with no parent with greater than a high school degree).

3.4 Results

3.4.1 Descriptive Results

Figure 3.1 depicts a survival analysis of the timing to first non-marital birth by race/ethnicity. For all women, the risk of a non-marital birth is highest in late adolescence and early adulthood, as indicated by the greater steepness of the curves at the earlier ages. Clearly however, at all ages Mexican American women's age specific risk of non-marital fertility is higher than for Whites, though not as high as for Blacks. Table 3.2 presents descriptive statistics on the individual level time-varying and time-constant independent variables. These statistics are similar to those in the previous chapter and so are not discussed in detail here. However, there are a few small differences as this sample is comprised only of women who have experienced some time at risk of a non-marital first birth since 1985.

Table 3.3a presents the descriptive statistics for the counties in which these women live. The first two rows describe the overall socioeconomic characteristics of the counties. Confirming previous research we see that minority women live in communities with a lower median household income than do White women, even when community is defined as a county, and these differences are much more pronounced when we look at the race/ethnic specific median household income. The rest of the table more closely focuses on the county level variables that are used in these analyses. Looking first at marriage market variables, we can see looking at the sex ratio of unmarried men that Mexican American women have the most favorable

markets, though for all groups of women there appears to be a surplus of men. Though the availability of men drops when the race/ethnic specific measure of employed men is used, Mexican American women still maintain an advantage. However, when the sex ratio is restricted to those men (not race/ethnic specific) with adequate earnings we see that minority women are the most disadvantaged, with Mexican American women being slightly more disadvantaged than Black women. This reflects the lower earnings of Mexican American men.

Looking next at measures of women's economic opportunity, we see that Black and Mexican American women live in counties with higher unemployment rates than White women. In terms of job type and availability, Mexican American and Black women live in communities with a lower proportion of people employed in manufacturing. McLaughlin et al. (1999) classify manufacturing jobs as mid quality jobs for women. To the extent that manufacturing offers favorable job opportunities for minority women with lower levels of skill, Mexican American women are the most disadvantaged of all. Similarly, Mexican American women live in communities with the greatest proportion of people employed in poor quality jobs (agriculture, the retail trade, personal services, business and repair services, and entertainment and recreation services). If low skill jobs are less of a deterrent to a non-marital birth, this difference may explain at least part of the Mexican American/White difference in non-marital fertility. All groups of women overwhelmingly live in urban areas. However, Mexican American women are the most concentrated in this environment.

Regarding the last three county level characteristics, we see that Mexican Americans live in counties with the lowest proportion of men employed full time and, not surprisingly, the highest proportion of immigrants. Interestingly, Blacks tend to live in counties characterized by the highest levels of residential stability.

In general there are not large race/ethnic differences in county level characteristics, with the exception of the race/ethnic specific measures. At best, county level characteristics will account for only a small part of the overall race/ethnic difference in non-marital fertility. However, to the extent that context does matter, it is much easier to enact change at this level from a policy perspective, as many people will be affected by one policy. Table 3.3b and Table 3.3c present the same information for women of lower socioeconomic status and higher socioeconomic status separately. There is not much difference in the county characteristics between these groups of women, though women of lower SES do live in counties that on average have lower median incomes. Women of lower SES are additionally less urban and more likely to be in a county with fewer high quality jobs and more manufacturing jobs. Despite the relatively small variation by socioeconomic status, it is important to keep in mind that county characteristics may affect women of lower and higher socioeconomic status differently.

3.4.2 Regression Analyses – Full Sample

The first step in this analysis is to run a null multilevel model. This model includes no explanatory variables and determines whether counties vary significantly

in their rate of non-marital fertility. The null model is shown in the first column of Table 3.4. The bottom of the table, under the section Random Effects, gives the variance of the intercept, or the county level variance. The between county variance in this case has a statistically significant value of .36, which tells us that counties do differ in their non-marital fertility rates[16]. The rest of the models in this table progressively add the individual level and county level variables. Model 2 serves as a baseline model, controlling for race/ethnicity. All results are presented as odds ratios. In this model we see that Blacks are 4.8 times more likely to have a non-marital birth than are White women while Mexican American women are roughly 2.5 times as likely. Model 3 adds the rest of the individual level variables.[17] As these results were discussed in the last chapter they are not discussed in detail here. However, it is important to note that though controlling for individual level variables reduces the

[16] The intraclass correlation is often calculated to determine the relative importance of the two sources of variation, between context and within context. The formula for this correlation coefficient is:
ρ_I = (population variance between macro units/total variance) = $\tau^2 / (\tau^2 + \sigma^2)$
This coefficient is defined by Snijders and Bosker (1999) as the "proportion of variance that is accounted for by the group level" (p. 17). However, this definition only holds for continuous outcome variables where the level 1 residual variance is constant across groups. With a dichotomous outcome, the individual level variance is determined by the mean. Because the mean varies across counties, each county will have a different individual level variance. However, one can interpret the parameter σ^2 to be the "average residual variance across counties" and proceed to calculate the intraclass correlation with this definition in mind (Snijders and Bosker 1999; Mosher et al. 2003). Because the logistic distribution for the level one residual has a variance of $\pi^2/3=3.29$, an alternative definition of the intraclass correlation coefficient with an intercept variance, τ^2, is : $\tau^2/(\tau^2 + 3.29)$. An advantage of this particular definition is that it can be extended to define the residual intraclass correlation, or the intraclass correlation controlling for any number of explanatory variables. Given this definition and a county level residual variance of .36, the intraclass correlation coefficient is .0986. This indicates a relatively small but statistically significant level of similarity among women living in the same county.

[17] Multilevel models are often difficult to estimate, that is, sometimes they don't converge. In order to improve this likelihood it is necessary to keep the number of variables to a minimum. While I originally included more complex categorizations of many of the independent variables in the analyses, the same as in the previous chapter, here I have attempted to simplify the categorization as much as possible without damaging the model fit.

race/ethnic differences somewhat, relatively large differences in non-marital fertility rates remain. Once individual level variables are controlled for there is a reduction in the county level variance in non-marital fertility, to .25, however this variance remains statistically significant.

I next determine whether there is an association between each county level variable and the risk of a non-marital first birth controlling solely for race/ethnicity. This provides descriptive information on the relationship of each county level variable (and the broader concept each measures) to non-marital fertility and to race/ethnic differences in non-marital fertility. These results are presented as odds ratios in Table 3.5. The top panel looks specifically at the marriage market variables. Of the three sex ratios, only the first measure, the race/ethnic specific sex ratio of employed men, is significantly related to non-marital fertility. Women who live in counties with a higher relative number of employed men have a substantially lower risk of a non-marital birth. Controlling for this reduces Black/White differences though it does little to change Mexican American/White differences. This is not surprising given that Mexican American women have the most favorable race/ethnic specific sex ratio of employed men, as seen in Table 3.3a. Perhaps somewhat surprising is that the sex ratio of men with adequate earnings is not significantly associated with non-marital fertility, a measure that Mexican American women are most disadvantaged on. Also interesting is the fact that the sex ratio of unmarried men, with no labor force restrictions, is not significantly related to the non-marital

fertility rate. This is counter to the finding by South (1996) and suggests that the employment status of men in an area, and not the sheer number of men, is the important factor in this measure.

The next two panels look at the role of an area's economic vitality and industrial composition. Both measures of the unemployment rate were significantly associated with increased rates of non-marital fertility. The higher the unemployment rate in the county the greater likelihood a women has of having a non-marital birth. Controlling for this variable does reduce the race/ethnic differences in non-marital fertility, and the race/ethnic specific measure does so more than the general measure. Similarly, the more job opportunities for women, as indicated by the female labor force opportunity index, the lower the risk of a non-marital birth. The next panel indicates that the type of employment opportunity, or industrial composition, is also significantly related to the risk of a non-marital birth, though somewhat less so than overall economic vitality. However, measures of industrial composition do not reduce the race/ethnic difference in the risk of a non-marital birth.

The last two panels look at the main and interactive role of the county level variables identified by Pinderhughes and Moore (1993) as particularly important for Hispanics. Focusing first on the main effects, the male full time employment rate is not significantly associated with the risk of a non-marital birth. This is not surprising given that the sex ratio of men with adequate earnings was not significantly associated with non-marital fertility, and these two variables measure somewhat

similar factors. Women in counties with a higher proportion of immigrants have a lower risk of a non-marital birth, and this actually suppresses race/ethnic differences in non-marital fertility slightly as minority women live in counties with higher proportions of immigrants. Lastly, increased residential stability is associated with an *increased* risk of a non-marital birth, counter to expectations. Controlling for this reduces Black/White differences, as Black women live in the most stable counties, but exacerbates Mexican American/White differences in non-marital fertility. It was hypothesized that these last three variables may be especially important for Hispanic groups. Turning to the last panel which looks at the interaction of each of these 3 variables with race/ethnicity, we see that only the proportion of immigrants in a county differentially impacts non-marital fertility. A larger percentage of immigrants in a county only provides a protective effect against the risk of a non-marital birth for White women, and actually increases the risk slightly for Mexican American and Black women (though this interaction is only significant for Black women). This finding lends more support to the argument that immigrants may be driving down employment opportunities for native-born minorities, thereby increasing the risk of a non-marital birth, as opposed to fostering a climate that promotes economic opportunity for all people of Mexican origin.

I next determine whether the relationships established above hold once individual level characteristics are controlled. These results are presented in Table 3.6a. The first model in this table is Model 3 from Table 3.4, depicting a multilevel

model with no county level covariates. Models 2 through 7 add the significant county level measures, one at a time. In general, the findings do not differ much from the descriptive analysis above. A greater race/ethnic specific sex ratio of unemployed men decreases the risk of a non-marital birth, again reducing Black/White differences quite substantially. All measures of economic vitality remain significant, such that women in areas with greater economic vitality have a lower risk of a non-marital birth. Because minority women are more likely to live in areas with higher unemployment and a lower female labor force opportunity index, controlling for these factors reduces race/ethnic differences. Regarding industrial composition, only the measure of the percentage of people employed in high quality jobs remains marginally associated with non-marital fertility, however controlling for this does nothing to reduce race/ethnic differences in non-marital fertility. Lastly, of the Pinderhughes and Moore (1993) measures, only residential stability remains (positively) associated with non-marital fertility. Of the interaction models, again the proportion of immigrants in a county differentially impacts non-marital fertility, as above. However, the interaction is now stronger and marginally significant for Mexican Americans. A higher proportion of immigrants in an area is associated with a higher risk of a non-marital birth for Mexican American women (and Black women), while reducing the risk for White women. In general, with the exception of the interaction model, the inclusion of each of these variables only slightly reduces the county level variance in non-marital fertility.

Table 3.6b shows the results from the final 4 models which include all county and individual level variables. Because the unemployment rate and race/ethnic specific unemployment rate are so highly correlated, these are looked at separately. The first two models add all the significant county level variables, while the second two models additionally add the interaction. The race/ethnic specific unemployment rate has more explanatory power than the unemployment rate and so I focus my discussion on the 2nd and 4th models. When all variables are included in the model together (Model 2), residential stability and the race/ethnic specific unemployment rate remain significantly related to non-marital fertility. Though the effect of the ratio of employed men to women is significant when in a model alone, in the full model this effect goes away. This is likely because the unemployment rate is picking up the employment part of the effect, and we know from the earlier analysis that the imbalance of men to women alone does not account for much difference in non-marital at the county level. This is similar to the work by Lichter et al. (1992) who find that the effect of a shortage of economically attractive men on marriage is not just a demographic artifact. The economic vitality of an area, as measured by the unemployment rate, appears to be more directly associated with non-marital fertility than the quality of jobs available to women. While economic vitality is conceptualized as a measure of opportunity for women, it is likely affecting opportunity for men as well. Increased residential stability, at least at the county level, is associated with an increase in non-marital fertility and as a result somewhat

exacerbates Mexican American/white differences, though it does reduce Black/white differences slightly.

These analyses demonstrate that there is significant county level variance in non-marital fertility rates. Some counties have significantly higher and some significantly lower non-marital fertility rates than the overall average. These analyses also demonstrate that a variety of structural/economic county level variables are associated with increased rates of non-marital fertility above and beyond individual level characteristics. However, with the exception of the race/ethnic specific unemployment rate, these variables do little to explain the county level variance in non-marital fertility and little to reduce race/ethnic differences. One criticism of counties is that the boundaries tend not to correspond to labor market areas. It may be the case that these variables would do more to reduce level-2 variance in alternative units, such as SEA's (State Economic Areas) or LMA's (Labor Market Areas). Data limitations preclude conducting the analysis at these levels. Nonetheless, one of the primary goals of this dissertation is to look at the effect of contextual factors on race/ethnic differences in non-marital fertility. Despite the fact that they are preferable units to census tracts when measuring marriage market and labor market characteristics, the labor (or marriage) market opportunities of individuals within the same county can be quite heterogeneous.

3.4.3 Regression Analyses – Socioeconomic Subsamples

It may be the case that particular structural/economic variables do more to explain race/ethnic differences for particular sub-populations. Poor White women are more likely to live in nonpoor communities, whereas poor minority women are more likely to live in higher poverty communities. Wilson (1987; 1996) suggests that poor women may be particularly vulnerable to community level disadvantage. The extra effect of being poor in a poor area, concentration effects, is arguably one reason why Black women are particularly disadvantaged across a number of outcomes including non-marital births. If the effect of being poor on non-marital fertility is especially large when one lives in a poor community it isn't enough to control for individual SES and community level disadvantage, an interaction term is needed. A series of analyses (not shown) confirm that the association between county level characteristics and non-marital fertility varies significantly by individual level SES. The county level measures whose effects vary by SES include the race/ethnic specific sex ratio of employed men, the unemployment rate, the race/ethnic specific unemployment rate, and the proportion of people employed in poor quality jobs. As a result, I next conduct analyses separately for women of lower and higher socioeconomic status. It would make interpretation of results difficult if all the relevant interaction terms were included in a pooled model, presenting results from models run separately eases the interpretation. Additionally, as the previous chapter documents, race/ethnic differences in the risk of a non-marital birth vary significantly by individual

socioeconomic status, with race/ethnic differences being larger among women of higher socioeconomic status once other individual level factors are controlled.

Table 3.7 presents the odds ratios from multilevel models predicting the risk of a non-marital birth for women of lower socioeconomic status and higher socioeconomic status separately. These models control for individual level characteristics. Results are similar to those found in Chapter 2; however there are some differences as this sample focuses on a more recent time period. Of primary importance is the fact that the difference between Mexican American and White women since 1985 is almost as large as it is for Black and White women among women of higher SES. In the lower SES sample, the difference between Mexican American and White women does not even attain statistical significance. Additionally, there is much more county level variance among women whose parents have gone beyond high school relative to those of lower SES. The next set of analyses looks at the effect of county level structural/economic variables on race/ethnic differences in non-marital fertility within these sub-populations. These results are shown in Tables 3.8 and 3.9.

There are substantial differences in the effects of county level characteristics by socioeconomic status. As seen in Table 3.8 the unemployment rate, the female labor force opportunity index, and residential stability are significantly associated with non-marital fertility among lower SES women. Keeping in mind that there is little Mexican American/White difference to explain, we see that none of the county

level variables does much to reduce race/ethnic differences in non-marital fertility among lower SES women. However as seen in Table 3.9, many more county level variables are associated with both the risk of a non-marital first birth and with race/ethnic differences in the risk of a non-marital first birth among women of higher SES.

There are several things to note in Table 3.9. First, both the race/ethnic specific sex ratio and the race/ethnic specific unemployment rate are strongly associated with the risk of a non-marital birth in this sample and controlling for these factors reduce race/ethnic differences substantially. Second, the industrial composition of an area, as measured by the proportion employed in poor quality jobs, is significantly associated with the risk of a non-marital birth, though does less than the above two measures to reduce race/ethnic differences in non-marital fertility. Lastly, both the proportion of immigrants and the male full time employment rate emerge as important among higher SES women, but only when included as interactions with race/ethnicity. As found in the full sample, living in an area with a greater proportion of immigrants actually increases a native-born Mexican American woman's risk of a non-marital birth. A higher male full time employment seems to have no effect of the risk of a non-marital birth among White and Mexican American women, but significantly reduces the risk among Black women.

This picture changes somewhat in the full models. The bottom panel presents three 'full' models. Model 11 includes no interactions, Model 12 the race/ethnic-

immigration interaction, and Model 13 the race/ethnic-male full time employment interaction. Only the race/ethnic-immigration interaction maintains significance with the inclusion of the other county level variables, however this interaction is not significant for Mexican Americans. This is likely because areas with a larger proportion of immigrants also have higher unemployment rates. As a result I focus discussion on the model with no interaction terms, Model 11. Here, the inclusion of the race/ethnic specific unemployment rate wipes out the effect of the sex ratio, as it did in the full sample. Interestingly, the only other county level variable that retains significance in this sample is the proportion of women employed in poor quality jobs. This variable is not significant for women of lower SES. It may be the case that jobs identified as poor quality (agriculture, the retail trade, personal services, business and repair services, and entertainment and recreation services) are jobs only women of higher socioeconomic status consider unacceptable enough to encourage them to seek alternate routes to adulthood. Controlling for all these factors together substantially reduces race/ethic differences in non-marital fertility. From the baseline model in Table 3.7, Model 11 reduces the Black/White difference by 64% ((5.12-2.15)/5.12) and the Mexican American/White difference by 52% ((4.48-2.15)/4.48).

From the analyses above we see that different factors influence the non-marital fertility of higher and lower SES women, as defined by parental education. Interestingly, race/ethnic differences in non-marital fertility are larger among higher SES women and are more strongly associated with community characteristics. While

this supports Wilson's claim of an interaction between context and socioeconomic status, the results run counter to expectations. The fact that there is no significant difference between low SES Mexican American women and low SES White women in the risk of a non-marital birth is itself an important finding. This is similar to the finding of McLaughlin and Lichter (1997) that poor Black women have the same probability of marriage as poor White women controlling for differences in a variety of factors including mate availability.

The fact that Mexican American/White differences in non-marital fertility are concentrated among women of higher SES is equally important. These differences are not only due to do the fact that Mexican American women live in more disadvantaged communities (perhaps due to discrimination in real estate practices), but also to the fact that women of higher SES are particularly susceptible to community disadvantage. This finding is in part consistent with the work done by Sucoff and Upchurch (1998) that focuses on the association between neighborhood context and the risk of adolescent childbearing among Black adolescents. They test the hypothesis that teens from affluent families will benefit more from living in an affluent neighborhood than will teens from low socioeconomic status families. This perspective suggests that there is a person-environment fit, and that more affluent teens are more able to fit in with the lifestyle of their more affluent neighbors. Less advantaged teens do not have the resources to capitalize on this community advantage. Though I look at measures of community disadvantage, rather than

advantage, the interaction models suggest that person-environment fit is important particularly for more affluent women. In this case, women of higher SES are particularly impacted by community disadvantage suggesting a greater person-environment mismatch. The fact that the industrial composition is significantly related to the risk of a non-marital birth lends support to this interpretation. The non-marital fertility of higher SES women is particularly impacted by an increase in poor quality jobs. Nonetheless, though reduced substantially, Mexican American/White differences remain among higher SES women once these county level characteristics are controlled.

3.5 Discussion

As discussed earlier, research on urban poverty and the family generally focuses on two sets of mechanisms linking context to individual behavior, instrumental mechanisms which describe how individual agency is limited by neighborhood opportunity and socialization mechanisms which describe how neighborhoods socialize those who grow up in them (Small and Newman 2001). This chapter focused on the first set of mechanisms, the instrumental mechanisms, which shape opportunity for men and women. In particular, this chapter explored whether the instrumental mechanisms identified as important in previous research explaining Black/White differences in marriage and non-marital fertility played a similar role in explaining Mexican American/White differences.

Analyses were conducted in an attempt to answer the three research questions specified in the background section of this chapter. Based on the work of Wilson (1987), I looked at the role that the availability of marriageable men played. Though Mexican American men tend to have higher levels of employment than Black men, Mexican origin women still cite the lack of economic opportunity for men, particularly intermittent and low paying employment, as a contributing factor to the increase in non-marital fertility. Secondly, in response to research suggesting that a lack of alternate routes to adulthood for women (and in particular, adolescent women) encourages early, and often non-marital, childbearing, I looked at variables that measured the economic vitality and industrial composition in an area. Lastly, I looked at the role of variables indicated by research which suggests the theoretical relationship between context and individual behavior needs to be amended for Mexican Americans to take into account the intermittent employment of Mexican American men, high levels of immigration, and the role of residential stability. Because the emphasis in this chapter is on these instrumental mechanisms, the county is used as the second level unit.

Of all the marriage market variables examined, only the race/ethnic specific measure of employed men was significantly associated with non-marital fertility rates. However, this effect went away when the unemployment rate was included in models. Decreased economic vitality, as measured by the unemployment rate, increased the risk of a non-marital birth for all women. This might indicate a reduced

availability of marriageable men, particularly for Black women. However, it may also provide evidence that women's employment opportunities discourage non-marital fertility. While employment opportunity for women may lower the risk of a non-marital birth, the quality of opportunity appears to be less important. Variables measuring the quality of jobs were weakly associated with non-marital fertility rates, at least in the full sample. Lastly, of the measures guiding question 3, suggested by Moore and Pinderhughes (1993), only residential stability was associated with non-marital fertility in the full sample. This effect was counter to expectations, with areas of higher stability having higher levels of non-marital fertility. In fact in this sample Mexican Americans were the least stable group, and thus Mexican American/White differences were somewhat exacerbated when this factor was controlled. This may reflect more recent declines in residential stability in some Mexican American communities (Moore and Pinderhughes 1993).

However, there were important differences in these relationships by individual level socioeconomic status. Mexican American/White differences (and Black/White differences) were largest among those of higher SES. In fact, the difference between Mexican Americans and Whites was not significant among those of lower SES. County level variables had a large impact on race/ethnic differences for those of higher SES; in particular the economic vitality of an area as measured by the race/ethnic specific unemployment rate. Additionally, industrial composition was important. Higher SES women in areas with a higher proportion of people employed

in poor quality jobs had an increased risk of a non-marital birth. It seems clear that higher parental SES does not offer minority women the same 'protection' it does for White women; however the amount of protection it does offer varies substantially by a county's characteristics, in particular the race/ethnic specific unemployment rate.

Wilson argues that poor women, who are disproportionately of minority status, will do particularly poorly in disadvantaged neighborhoods. As discussed earlier this is a class-based perspective for race/ethnic differences in family formation processes. This analysis does provide some support for class based arguments, though in a somewhat different way than suggested by Wilson. The fact that among women of lower SES there is no significant difference in the non-marital fertility rates of Mexican American and White women, coupled with the fact that Mexican American women are more likely to be poor, suggests that part of the Mexican American/White difference in non-marital fertility is class based. At the same time there are large Mexican American/White differences among women of higher SES, and it is this group that is particularly susceptible to the conditions of their community context. While some researchers continue to focus on the behaviors of women of lower SES, arguing that there is a growing minority middle class who are doing fine, this analysis suggests that this more advantaged group may actually not be doing that fine and are particularly subject to the economic conditions of their social context.

Clearly, of particular importance for minority women of higher SES is the race/ethnic specific unemployment rate. This variable by far does the most to reduce

race/ethnic differences in non-marital fertility. Yet while this indicates that the economic vitality of an area is important, these analyses are unable to get at why. The unemployment rate is likely more than just a reflection of alternate routes of adulthood for women, or an indicator of a shortage of marriageable men. These analyses also suggest that measures of the overall county experience really do not do an adequate job of indicating opportunity. The experience of individuals within a county varies substantially by race/ethnicity. As seen in the descriptive and multivariate analyses, the overall unemployment rate masks much heterogeneity in the race/ethnic specific unemployment rate. The same is true for the sex ratio. This suggests that there is an additional level of context, below the county, to be taken into account. Thus while Blacks, Whites, and Mexican Americans may live within the same county, the opportunity structure varies for each group such that there exists a 'Black' county, a 'White' county, and a 'Mexican American' county all within the same county. Aside from the one measure of the sex ratio and the race/ethnic specific unemployment rate, I am unable to construct race/ethnic specific measures of other variables used in these analyses because these variables are not available on the NSFG-CDF.

Nonetheless I do find that controlling for race/ethnic differences in county level unemployment bring down the race/ethnic difference in non-marital fertility substantially more than individual factors alone, particularly for women of higher SES. Context is important above and beyond one's individual characteristics. Yet, as

mentioned above, a weakness of county level variables is that they may be masking quite a bit of heterogeneity in the county experience, particularly by race/ethnicity. An alternate way to look more closely at race/ethnic differences in non-marital fertility is to look at the role of contextual factors measured on a smaller spatial scale. The next chapter explores the role of more localized contexts, measured at the level of the census tract. As census tract boundaries are considered by many to be the best measure of neighborhood, variables measured at this unit of analysis may provide a better approximation of the social context, and may not be characterized by such heterogeneity. Importantly, it allows me to look more closely at the role of other contextual variables. While broader contexts, such as counties, are considered the best spatial scale at which to measure the instrumental mechanisms linking context to family formation behaviors, research also emphasizes the importance of socialization mechanisms, or the factors that help socialize individuals. As Jencks (1992) argues, the shortage in marriageable men did not increase enough after 1970 to account for the rapid decline in marriage among Blacks. He argues that marriage must be losing "its charms for noneconomic reasons as well" (1992: 133). The same argument has been made for non-marital fertility; economic reasons are not enough to account for race/ethnic differences in non-marital fertility. Chapter 4 looks more closely at the role of these socialization mechanisms, alone and coupled with the instrumental mechanisms discussed in this chapter.

Figure 3.1: Proportion of Women not experiencing a First Premarital Birth by Age, by Race/Ethnicity

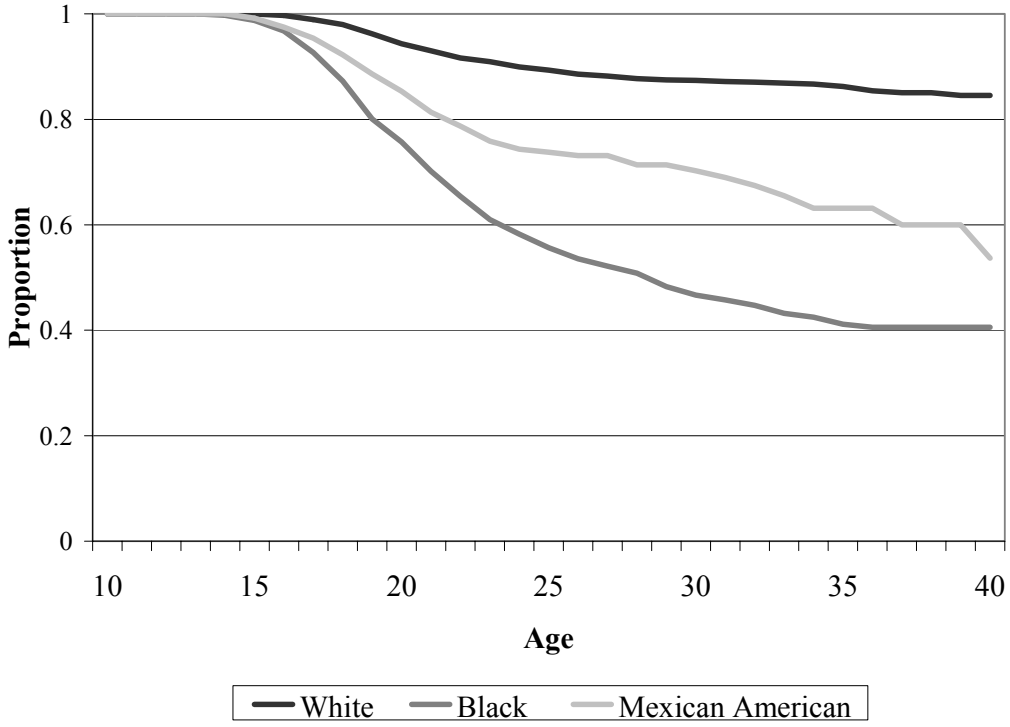

Table 3.1: County Level Contextual Variables - Structural and Economic Opportunity

Marriage Market	
Sex Ratio of Employed Men	Race/ethnic specific proportion of men aged 15-44 who are in the labor force to women aged 15-44
Sex Ratio of Unmarried Employed Men	Proportion of unmarried men aged 15-44 who are in the labor force to women aged 15-44
Sex Ratio of men with Adequate Earnings	Proportion of men aged 15-44 who are in the labor force to women aged 15-44, with adequate earnings (income greater than 185% of poverty)
Women's Employment Opportunities	
Economic Vitality	Unemployment rate
	Race/Ethnic Specific Unemployment Rate
	Female Labor Force Opportunity Index - expected number of jobs for female workers relative to the potential supply of female workers
Industrial Composition	Percentage of people employed in manufacturing job
	Proportion of jobs in the county that are high quality jobs
	Proportion of jobs in the county that are low quality jobs
	Urban Status
Other County Level Measures	
Male Underemployment	Male Full Time Employment Rate
Immigration	Proportion of the county residents that are immigrants
Residential Stability	Proportion of county residents who lived in the same county five years ago

Table 3.2: Percent Distribution of Individual-Level Independent Variables by Race/Ethnicity

	White (n=3,172)	Black (n=1,193)	Mexican American (n=368)
	%	%	%
Religion			
Mainstream Protestant	29.7	11.3	5.4
Fundamentalist Protestant	24.8	71.6	6.3
Catholic	33.2	9.4	80.5
Other Religion	12.3	7.7	7.9
Parental Education			
Less than High School	7.3	18.1	42.8
High School	39.0	40.7	30.3
Some College	19.0	16.9	14.9
College Graduate	34.5	24.1	12.0
Family Structure at Age 14			
Two parent	69.9	45.0	63.3
One parent	15.9	35.0	19.6
Step parent	12.6	12.8	13.0
Other Family Type	1.6	7.2	4.1
Ever Cohabited before Marriage	38.1	30.6	26.4
Enrolled in High School - Age 17	92.3	90.9	86.1
Enrolled in College - Age 20	59.4	42.1	47.0
Working Full Time - Age 20	40.1	34.5	44.3
Working Part Time - Age 20	31.3	25.2	29.0
Cohort			
Born before 1965	27.4	23.5	18.2
Born Between 1965-1970	48.0	53.1	52.2
Born after 1970	24.6	23.5	29.6

Table 3.3a: Descriptive Statistics on Community-Level Variables by Race/Ethnicity

	White (n=3,172)	Black (n=1,193)	Mexican American (n=368)
Socioeconomic Status			
Median Household Income	31,148	29,755	30,315
Race/Ethnic Specific Median HH Income	32,566	20,390	24,159
Marriage Market			
Race/Ethnic Specific Sex Ratio - Employed Men	0.73	0.51	0.79
Sex Ratio of Unmarried Men	1.16	1.05	1.19
Sex Ratio of Men with Adequate Earnings	0.76	0.66	0.64
Women's Economic Opportunities			
Unemployment Rate	0.06	0.07	0.08
Race/Ethnic Unemployment Rate	0.05	0.14	0.11
Female Labor Force Opportunity Index	0.07	0.07	0.07
% Jobs - High Quality	35.00	37.10	35.00
% Jobs - Low Quality	29.60	28.20	32.20
% Jobs in Manufacturing	18.40	17.30	15.10
% Urban	82.0	92.0	96.0
Other Characteristics			
Male Full Time Employment Rate	0.53	0.52	0.51
Proportion HH Living in Same County 5 Years ago	0.79	0.81	0.79
Proportion Foreign Born	0.06	0.09	0.16

Table 3.3b: Descriptive Statistics on Community-Level Variables by Race/Ethnicity, Low SES

	White (n=1,477)	Black (n=753)	Mexican American (n=262)
Socioeconomic Status			
Median Household Income	29,992	28,731	30,824
Race/Ethnic Specific Median HH Income	31,316	19,596	24,630
Marriage Market			
Race/Ethnic Specific Sex Ratio - Employed Men	0.72	0.50	0.80
Sex Ratio of Unmarried Men	1.16	1.04	1.19
Sex Ratio of Men with Adequate Earnings	0.76	0.65	0.65
Women's Economic Opportunities			
Unemployment Rate	0.06	0.07	0.08
Race/Ethnic Unemployment Rate	0.05	0.14	0.11
Female Labor Force Opportunity Index	0.06	0.06	0.07
% Jobs - High Quality	34.41	36.80	34.66
% Jobs - Low Quality	29.70	28.16	32.30
% Jobs in Manufacturing	19.18	17.91	15.25
% Urban	77.5	89.1	96.9
Other Characteristics			
Male Full Time Employment Rate	0.53	0.51	0.51
Proportion HH Living in Same County 5 Years ago	0.80	0.82	0.78
Proportion Foreign Born	0.05	0.08	0.15

Table 3.3c: Descriptive Statistics on Community-Level Variables by Race/Ethnicity, High SES

	White (n=1,695)	Black (n=440)	Mexican American (n=106)
Socioeconomic Status			
Median Household Income	32,141	31,530	30,404
Race/Ethnic Specific Median HH Income	33,676	22,063	24,124
Marriage Market			
Race/Ethnic Specific Sex Ratio - Employed Men	0.73	0.53	0.76
Sex Ratio of Unmarried Men	1.15	1.08	1.19
Sex Ratio of Men with Adequate Earnings	0.76	0.69	0.63
Women's Economic Opportunities			
Unemployment Rate	0.06	0.07	0.08
Race/Ethnic Unemployment Rate	0.05	0.13	0.11
Female Labor Force Opportunity Index	0.07	0.07	0.07
% Jobs - High Quality	35.55	36.96	35.59
% Jobs - Low Quality	29.52	28.31	31.71
% Jobs in Manufacturing	17.64	16.78	14.93
% Urban	87.0	94.5	92.9
Other Characteristics			
Male Full Time Employment Rate	0.54	0.53	0.51
Proportion HH Living in Same County 5 Years ago	0.78	0.80	0.78
Proportion Foreign Born	0.07	0.10	0.15

Table 3.4: Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth - No County Level Variables

	Null Model			Model 2			Model 3		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Baseline Odds	0.01		***	0.01		***	0.02		***
Race/Ethncity (White)									
Black				4.78	22.4	***	4.26	15.6	***
Mexican American				2.54	7.3	***	1.75	3.5	***
Age (17-20)									
less than 17							0.28	-11.3	***
21-25							0.63	-4.7	***
greater than 25							0.23	-14.0	***
Period (1987-1995)									
1980-1986							0.56	-6.7	***
Family Structure at age 14 (Two parent)									
Single or Step Parent							1.27	3.5	***
Other							1.95	5.1	***
Parental Education (<= High School)									
Some College							0.72	-3.6	***
College Graduate							0.48	-7.7	***
Employment and Schooling									
Enrolled in High School							0.40	-8.8	***
Enrolled in College							0.27	-10.9	***
Employed							0.64	-6.1	***
Religion (All Other)									
Fundamentalist Protestant							1.21	2.5	*
Cohabiting prior to birth							4.00	12.0	***
Cohabitation*Black							0.58	-3.3	***
Cohabitation*Mexican American							2.36	3.4	***
URBAN							1.32	2.3	*
Random Effects									
Intercept	0.36	6.0	***	0.16	3.5	***	0.25	4.4	***
Intraclass Correlation Coefficient	0.10			0.05			0.07		

***p<.001, **p<.01, *p<.05

Note: based on 64,811 person half years in 795 counties

Table 3.5: Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Effect of Each County Level Variable on the Risk of a Non-Marital Birth

Marriage Market	Baseline			Sex Ratio - Employed Men - Race/Ethnic Specific		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Baseline Odds	0.007		***	0.006		***
Level 1						
Black	4.78	21.08	***	3.81	11.73	***
Mexican American	2.54	7.26	***	2.62	7.44	***
Level 2						
VARIABLE				0.54	-2.65	**
Random Effects						
Intercept	0.16	3.45	***	0.12	2.80	**
Intraclass Correlation Coefficient	0.05			0.04		
	Sex Ratio - Men with Adequate Earnings			Sex Ratio - Unmarried Men		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Baseline Odds	0.007		***	0.007		***
Level 1						
Black	4.72	20.41	***	4.76	20.44	***
Mexican American	2.50	7.02	***	2.54	7.25	***
Level 2						
VARIABLE	0.88	-0.76		0.94	-0.25	
Random Effects						
Intercept	0.15	3.40	***	0.16	3.42	***
Intraclass Correlation Coefficient	0.04			0.05		

Table 3.5 (continued): Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Effect of Each County Level Variable on the Risk of a Non-Marital Birth

Women's Economic Opportunity - Economic Vitality	Unemployment Rate			Race/Ethnic Specific Unemployment Rate			Female Labor Force Opportunity Index		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Baseline Odds	0.005		***	0.006		***	0.012		***
Level 1									
Black	4.64	20.46	***	3.39	10.31	***	4.74	20.98	***
Mexican American	2.42	6.78	***	1.97	4.67	***	2.51	7.19	***
Level 2									
VARIABLE	1.04	2.37	*	1.04	3.77	***	0.92	-2.55	*
Random Effects									
Intercept	0.15	3.26	***	0.12	2.73	**	0.14	3.12	***
Intraclass Correlation Coefficient	0.04			0.03			0.04		

Women's Economic Opportunity - Industrial Composition	% Employed in Manufacturing			% Employed in High Quality Jobs			% Employed in Low Quality Jobs		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Baseline Odds	0.006		***	0.011		***	0.006		***
Level 1									
Black	4.82	21.16	***	4.87	21.16	***	4.80	20.98	***
Mexican American	2.61	7.41	***	2.56	7.31	***	2.51	7.12	***
Level 2									
VARIABLE	1.01	1.79	^	0.99	-1.99	*	1.00	0.54	
Random Effects									
Intercept	0.15	3.39	***	0.15	3.38	***	0.16	3.42	***
Intraclass Correlation Coefficient	0.04			0.04			0.05		

Table 3.5 (continued): Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Effect of Each County Level Variable on the Risk of a Non-Marital Birth

Other County Measures	Male Full Time Employment Rate			% Immigrants			% Lived in Same County 5 Years Ago		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Baseline Odds	0.010		***	0.006		***	0.001		***
Level 1									
Black	4.74	20.90	***	4.81	21.15	***	4.66	20.65	***
Mexican American	2.50	7.12	***	2.65	7.44	***	2.60	7.40	***
Level 2									
VARIABLE	0.99	-1.33		0.95	-1.67	^	1.02	3.70	***
Random Effects									
Intercept	0.15	3.35	***	0.15	3.35	***	0.14	3.08	***
Intraclass Correlation Coefficient	0.04			0.04			0.04		

Other County Measures - Interactions	Male Full Time Employment Rate			% Immigrants			% Lived in Same County 5 Years Ago		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Baseline Odds	0.013		***	0.004		***	0.002		***
Level 1									
Black	3.39	1.99	*	7.32	9.57	***	1.54	0.53	
Mexican American	1.55	0.42		4.01	4.28	***	8.17	1.55	
Level 2									
VARIABLE	0.99	-1.38		0.88	-2.77	**	1.01	1.86	^
VARIABLE*Black	1.01	0.55		1.13	2.29	*	1.01	1.37	
VARIABLE*Mexican American	1.01	0.45		1.15	1.15		0.99	-0.85	
Random Effects									
Intercept	0.15	3.38	***	0.15	3.35	***	0.14	3.07	**
Intraclass Correlation Coefficient	0.04			0.04			0.04		

***p<.001, **p<.01, *p<.05, ^p<.10

Table 3.6a: Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth - County Level Variables

	Full - Individual Level Model			Sex Ratio - Race/Ethnic Specific, Employed Men			Unemployment Rate		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
LEVEL 1									
Baseline Odds	0.02		***	0.02		***	0.01		***
Race/Ethncity (White)									
Black	4.26	15.5	***	3.51	9.8	***	4.16	15.2	***
Mexican American	1.75	3.5	***	1.80	3.7	***	1.66	3.1	**
Age (17-20)									
less than 17	0.28	-11.3	***	0.28	-11.3	***	0.28	-11.3	***
21-25	0.63	-4.8	***	0.63	-4.8	***	0.64	-4.7	***
greater than 25	0.23	-14.1	***	0.23	-14.1	***	0.23	-14.0	***
Period (1987-1995)									
1980-1986	0.56	-6.7	***	0.56	-6.7	***	0.57	-6.7	***
Family Structure at age 14 (Two parent)									
Single or Step Parent	1.27	3.5	***	1.28	3.5	***	1.27	3.5	***
Other	1.95	5.1	***	1.97	5.2	***	1.96	5.2	***
Parental Education (<= High School)									
Some College	0.72	-3.6	***	0.73	-3.5	***	0.72	-3.6	***
College Graduate	0.48	-7.7	***	0.48	-7.6	***	0.48	-7.6	***
Employment and Schooling									
Enrolled in High School	0.40	-8.9	***	0.40	-8.9	***	0.40	-8.9	***
Enrolled in College	0.27	-11.0	***	0.27	-11.0	***	0.27	-11.0	***
Employed	0.64	-6.1	***	0.65	-6.0	***	0.64	-6.0	***
Religion (All Other)									
Fundamentalist Protestant	1.21	2.5	*	1.20	2.4	*	1.20	2.3	*
Cohabiting prior to birth	4.00	12.0	***	4.00	12.0	***	4.00	12.0	***
Cohabitation*Black	0.58	-3.3	***	0.57	-3.3	***	0.58	-3.3	***
Cohabitation*Mexican American	2.36	3.4	***	2.38	3.4	***	2.39	3.4	***
URBAN	1.32	2.4	*	1.35	2.6	**	1.37	2.7	**
LEVEL 2									
Log Sex Ratio				0.584	-2.2	*			
Unemployment Rate							1.054	2.7	**
Race/ethnic Specific Unemployment									
Female Labor Force Opportunity Index									
% Employed in High Quality Jobs									
Residential Stability									
Proportion Immigrants									
Proportion Immigrants*Black									
Proportion Immigrants*Mexican American									
Random Effects									
Intercept	0.245	4.4	***	0.225	4.1	***	0.227	4.1	***
Intraclass Correlation Coefficient	0.069			0.064			0.065		

Table 3.6a (continued): Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth - County Level Variables

	Race/Ethnic Specific Unemployment Rate			Female Labor Force Index			% Employed in High Quality Jobs		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
LEVEL 1									
Baseline Odds	0.02		***	0.04		***	0.03		***
Race/Ethncity (White)									
Black	3.03	8.3	***	4.25	15.5	***	4.33	15.6	***
Mexican American	1.37	1.8	^	1.72	3.4	***	1.76	3.6	***
Age (17-20)									
less than 17	0.28	-11.2	***	0.28	-11.3	***	0.28	-11.3	***
21-25	0.63	-4.7	***	0.64	-4.7	***	0.64	-4.7	***
greater than 25	0.23	-14.0	***	0.23	-13.9	***	0.23	-14.0	***
Period (1987-1995)							1.00		
1980-1986	0.57	-6.7	***	0.57	-6.6	***	0.56	-6.7	***
Family Structure at age 14 (Two parent)									
Single or Step Parent	1.27	3.5	***	1.28	3.6	***	1.28	3.6	***
Other	1.96	5.2	***	1.96	5.2	***	1.95	5.2	***
Parental Education (<= High School)									
Some College	0.73	-3.5	***	0.73	-3.5	***	0.72	-3.6	***
College Graduate	0.48	-7.6	***	0.49	-7.4	***	0.48	-7.6	***
Employment and Schooling									
Enrolled in High School	0.40	-8.8	***	0.40	-8.9	***	0.40	-8.9	***
Enrolled in College	0.27	-10.9	***	0.27	-11.0	***	0.27	-10.9	***
Employed	0.65	-5.9	***	0.65	-6.0	***	0.64	-6.1	***
Religion (All Other)									
Fundamentalist Protestant	1.20	2.4	*	1.19	2.2	*	1.21	2.5	*
Cohabiting prior to birth	3.98	11.9	***	4.03	12.1	***	4.02	12.0	***
Cohabitation*Black	0.58	-3.3	***	0.57	-3.4	***	0.58	-3.3	***
Cohabitation*Mexican American	2.40	3.4	***	2.36	3.4	***	2.34	3.4	***
URBAN	1.37	2.7	**	1.53	3.4	***	1.39	2.8	**
LEVEL 2									
Log Sex Ratio									
Unemployment Rate									
Race/ethnic Specific Unemployment	1.041	3.5	***						
Female Labor Force Opportunity Index				0.887	-3.0	**			
% Employed in High Quality Jobs							0.987	-1.9	^
Residential Stability									
Proportion Immigrants									
Proportion Immigrants*Black									
Proportion Immigrants*Mexican American									
Random Effects									
Intercept	0.209	3.9	***	0.227	4.1	***	0.241	4.3	***
Intraclass Correlation Coefficient	0.060			0.065			0.068		

Table 3.6a (continued): Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth - County Level Variables

	Residential Stability			Interaction - Proportion of Residents that are Immigrants		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
LEVEL 1						
Baseline Odds	0.004		***	0.011		***
Race/Ethncity (White)						
Black	4.17	15.3	***	7.02	8.9	***
Mexican American	1.80	3.7	***	3.36	3.7	***
Age (17-20)						
less than 17	0.28	-11.3	***	0.27	-11.4	***
21-25	0.63	-4.8	***	0.64	-4.7	***
greater than 25	0.23	-14.1	***	0.24	-13.8	***
Period (1987-1995)				1.00		
1980-1986	0.57	-6.7	***	0.57	-6.7	***
Family Structure at age 14 (Two parent)						
Single or Step Parent	1.28	3.6	***	1.28	3.5	***
Other	1.96	5.2	***	1.96	5.2	***
Parental Education (<= High School)						
Some College	0.73	-3.6	***	0.73	-3.5	***
College Graduate	0.49	-7.4	***	0.48	-7.5	***
Employment and Schooling						
Enrolled in High School	0.40	-8.9	***	0.40	-9.0	***
Enrolled in College	0.27	-10.9	***	0.27	-11.0	***
Employed	0.64	-6.0	***	0.64	-6.1	***
Religion (All Other)						
Fundamentalist Protestant	1.21	2.5	*	1.17	2.0	*
Cohabiting prior to birth	4.06	12.1	***	4.07	12.1	***
Cohabitation*Black	0.57	-3.4	***	0.57	-3.4	***
Cohabitation*Mexican American	2.38	3.4	***	2.37	3.4	***
URBAN	1.37	2.7	**	1.42	2.9	**
LEVEL 2						
Log Sex Ratio						
Unemployment Rate						
Race/ethnic Specific Unemployment						
Female Labor Force Opportunity Index						
% Employed in High Quality Jobs						
Residential Stability	1.020	3.5	***			
Proportion Immigrants				0.868	-2.8	**
Proportion Immigrants*Black				1.153	2.5	*
Proportion Immigrants*Mexican American				1.264	1.9	^
Random Effects						
Intercept	0.229	4.1	***	0.252	4.5	***
Intraclass Correlation Coefficient	0.065			0.071		

***p<.001, **p<.01, *p<.05, ^p<.10

64,811 person half years, 795 counties

Table 3.6b: Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth - All County Level Variables

	Unemployment			Race/Ethnic Specific Unemployment		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
LEVEL 1						
Baseline Odds	0.008		***	0.008		***
Race/Ethncity (White)						
Black	4.08	10.1	***	3.47	8.0	***
Mexican American	1.74	3.4	***	1.46	2.0	*
Age (17-20)						
less than 17	0.28	-11.3	***	0.28	-11.3	***
21-25	0.64	-4.7	***	0.64	-4.7	***
greater than 25	0.23	-14.0	***	0.23	-14.0	***
Period (1987-1995)						
1980-1986	0.57	-6.6	***	0.57	-6.7	***
Family Structure at age 14 (Two parent)						
Single or Step Parent	1.28	3.6	***	1.28	3.6	***
Other	1.98	5.3	***	1.97	5.2	***
Parental Education (<= High School)						
Some College	0.73	-3.5	***	0.73	-3.5	***
College Graduate	0.49	-7.4	***	0.49	-7.4	***
Employment and Schooling						
Enrolled in High School	0.40	-8.9	***	0.40	-8.9	***
Enrolled in College	0.27	-10.9	***	0.27	-10.9	***
Employed	0.65	-6.0	***	0.65	-6.0	***
Religion (All Other)						
Fundamentalist Protestant	1.19	2.3	*	1.20	2.3	*
Cohabiting prior to birth	4.06	12.1	***	4.05	12.1	***
Cohabitation*Black	0.57	-3.4	***	0.57	-3.3	***
Cohabitation*Mexican American	2.38	3.4	***	2.39	3.4	***
URBAN	1.48	3.0	**	1.47	3.0	**
LEVEL 2						
Log Sex Ratio	0.926	-0.3		1.181	0.5	
Unemployment Rate	1.027	1.0				
Race/ethnic Specific Unemployment				1.031	2.1	*
Female Labor Force Opportunity Index	0.972	-0.5		0.964	-0.7	
% Employed in High Quality Jobs	0.992	-1.0		0.996	-0.6	
Residential Stability	1.013	2.0	*	1.014	2.1	*
Proportion Immigrants						
Proportion Immigrants*Black						
Proportion Immigrants*Mexican American						
Random Effects						
Intercept	0.224	4.0	***	0.218	4.0	***
Intraclass Correlation Coefficient	0.064			0.062		

Table 3.6b (continued): Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth - All County Level Variables

	Full Model - Unemployment, Interactions			Full Model - Race/Ethnic Specific Unemployment, Interactions		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
LEVEL 1						
Baseline Odds	0.007		***	0.007		***
Race/Ethncity (White)						
Black	6.49	8.1	***	5.58	7.1	***
Mexican American	2.92	3.2	**	2.38	2.5	*
Age (17-20)						
less than 17	0.28	-11.3	***	0.27	-11.3	***
21-25	0.64	-4.7	***	0.64	-4.3	***
greater than 25	0.24	-13.8	***	0.24	-13.8	***
Period (1987-1995)						
1980-1986	0.57	-6.6	***	0.57	-6.6	***
Family Structure at age 14 (Two parent)						
Single or Step Parent	1.28	3.6	***	1.28	3.5	***
Other	1.99	5.3	***	1.99	5.3	***
Parental Education (<= High School)						
Some College	0.73	-3.5	***	0.73	-3.4	***
College Graduate	0.49	-7.3	***	0.49	-7.3	***
Employment and Schooling						
Enrolled in High School	0.40	-8.9	***	0.40	-8.9	***
Enrolled in College	0.27	-10.9	***	0.27	-10.9	***
Employed	0.65	-6.0	***	0.65	-6.0	***
Religion (All Other)						
Fundamentalist Protestant	1.16	1.9	^	1.17	2.0	*
Cohabiting prior to birth	4.11	12.2	***	4.09	12.2	***
Cohabitation*Black	0.56	-3.4	***	0.57	-3.4	***
Cohabitation*Mexican American	2.38	3.4	***	2.39	3.4	***
URBAN	1.50	3.1	**	1.49	3.1	**
LEVEL 2						
Log Sex Ratio	0.847	-0.5		1.088	0.3	
Unemployment Rate	1.023	0.1				
Race/ethnic Specific Unemployment				1.031	2.0	*
Female Labor Force Opportunity Index	0.964	-0.5		0.961	-0.7	
% Employed in High Quality Jobs	0.992	-1.0		0.995	-0.6	
Residential Stability	1.012	1.7	^	1.012	1.8	*
Proportion Immigrants	0.919	-1.5		0.917	-1.6	
Proportion Immigrants*Black	1.155	2.5	*	1.158	2.6	*
Proportion Immigrants*Mexican America	1.205	1.5		1.187	1.4	
Random Effects						
Intercept	0.218	4.0	***	0.230	4.1	***
Intraclass Correlation Coefficient	0.062			0.065		

***p<.001, **p<.01, *p<.05, ^p<.10

64,811 person half years, 795 counties

Table 3.7: Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth, by SES - No County Level Variables

	Lower Socioeconomic Status (n=31,880 person half years)			Higher Socioeconomic Status (n=32,931 person half years)		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Baseline Odds	0.02		***	0.01		***
Race/Ethncity (White)						
Black	4.06	12.4	***	5.12	10.7	***
Mexican American	1.25	1.2		4.48	5.9	***
Age (17-20)						
less than 17	0.30	-8.8	***	0.22	-8.8	***
21-25	0.72	-3.0	**	0.50	-4.3	***
greater than 25	0.25	-11.4	***	0.22	-8.3	***
Period						
Per 3	0.56	-5.9	***	0.52	-4.3	***
Family Structure at age 14 (Two parent)						
Single or Step Parent	1.22	2.4	*	1.57	3.9	***
Other	1.71	3.6	***	3.70	5.1	***
Parental Education (<= High School)						
Some College				1.44	3.4	***
College Graduate						
Employment and Schooling						
Enrolled in High School	0.39	-7.5	***	0.36	-6.2	***
Enrolled in College	0.27	-8.2	***	0.29	-8.0	***
Employed	0.63	-5.4	***	0.62	-4.0	***
Religion (All Other)						
Fundamentalist Protestant	1.17	1.7	^	1.45	2.9	**
Cohabiting prior to birth	3.86	9.6	***	4.62	8.5	***
Cohabitation*Black	0.56	-3.0	**	0.86	-0.5	
Cohabitation*Mexican American	3.30	4.1	***	0.94	-0.1	
URBAN	1.32	2.1	*	1.52	1.8	^
Random Effects						
Intercept	0.30	4.0	***	1.28	5.5	***
Intraclass Correlation Coefficient	0.08			0.28		

***p<.001, **p<.01, *p<.05, ^p<.10

Table 3.8: Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth, Lower SES

	Model 1			Model 2			Model 3			Full Model		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
LEVEL 1												
Baseline Odds	0.02		***	0.04		***	0.01		***	0.01		***
Race/Ethncity (White)												
Black	3.98	12.2	***	4.05	12.4	***	4.00	12.3	***	3.99	12.2	***
Mexican American	1.19	0.9		1.23	1.1		1.28	1.3		1.24	1.1	
Cohabiting prior to birth	3.85	9.6	***	3.89	9.6	***	3.91	9.7	***	3.91	9.7	***
Cohabitation*Black	0.56	-2.9	**	0.56	-3.0	**	0.56	-3.0	**	0.56	-3.0	**
Cohabitation*Mexican American	3.36	4.1	***	3.29	4.1	***	3.33	4.1	***	3.34	4.1	***
LEVEL 2												
Unemployment Rate	1.05	2.0	*							1.02	0.6	
Female Labor Force Opportunity Index				0.90	-2.2	*				0.95	-0.8	
Residential Stability							1.02	2.3	*	1.01	1.4	
Random Effects												
Intercept	0.29	3.9	***	0.29	3.8	***	0.29	3.8	***	0.29	3.8	***
Intraclass Correlation Coefficient	0.081			0.080			0.081			0.081		

***p<.001, **p<.01, *p<.05, ^p<.10

Note: Models control for all other individual level factors

n=31,880 person half years

Table 3.9: Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth, Higher SES

	Model 1			Model 2			Model 3		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
LEVEL 1									
Baseline Odds	0.003		***	0.004		***	0.003		***
Race/Ethncity (White)									
Black	2.76	4.6	***	4.89	10.9	***	1.77	2.3	***
Mexican American	4.33	6.2	***	4.19	6.1	***	2.07	2.6	***
LEVEL 2									
Race/Ethnic Specific Sex Ratio of Employed Men (logged)	0.20	-3.5	***						
Unemployment Rate				1.08	1.9	^			
Race/Ethnic Specific Unemployment							1.13	5.3	***
Female Labor Force Opportunity Index									
Percent in Low Quality Jobs									
Percent in High Quality Jobs									
Proportion Foreign Born (logged)									
Residential Stability									
Random Effects									
Intercept	1.15	5.0	***	1.34	5.6	***	1.25	5.3	***
Intraclass Correlation Coefficient	0.26			0.29			0.28		

	Model 4			Model 5			Model 6			Model 7		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
LEVEL 1												
Baseline Odds	0.015		***	0.002		***	0.014		***	0.004		***
Race/Ethncity (White)												
Black	4.97	11.1	***	5.10	11.2	***	5.11	11.2	***	5.09	11.3	***
Mexican American	4.34	6.3	***	4.18	6.1	***	4.47	6.5	***	4.65	6.6	***
LEVEL 2												
Race/Ethnic Specific Sex Ratio of Employed Men (logged)												
Unemployment Rate												
Race/Ethnic Specific Unemployment												
Female Labor Force Opportunity	0.63	-5.8	*									
Percent in Low Quality Jobs				1.03	2.0	*						
Percent in High Quality Jobs							0.97	-1.9	^			
Proportion Foreign Born (logged)										0.88	-1.7	^
Residential Stability												
Random Effects												
Intercept	1.25	5.5	***	1.23	5.5	***	1.22	5.5	***	1.21	5.5	***
Intraclass Correlation Coefficient	0.28			0.27			0.27			0.27		

Table 3.9 (continued): Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth, Higher SES

	Model 8			Model 9			Model 10		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
LEVEL 1									
Baseline Odds	0.001		***	0.003		***	0.004		***
Race/Ethncity (White)									
Black	4.92	11.0	***	8.18	5.6	***	60.05	3.6	***
Mexican American	4.61	6.6	***	13.42	4.4	***	1.40	0.2	
LEVEL 2									
Race/Ethnic Specific Sex Ratio of Unemployment Rate									
Race/Ethnic Specific Female Labor Force Opportunity									
Percent in Low Quality Jobs									
Percent in High Quality Jobs									
Proportion Foreign Born (logged)				0.80	-2.4	*			
Residential Stability	1.03	2.5	*						
Proportion Foreign Born*Black				1.16	1.3				
Proportion Foreign Born*Mexican American				1.55	1.9	^			
Proportion Males Employed Full Time							1.01	0.4	
Full Time*Black							0.95	-2.2	*
Full Time*Mexican American							1.02	0.6	
Random Effects									
Intercept	1.36	5.7	***	1.18	5.4	***	1.40	5.9	***
Intraclass Correlation Coefficient	0.29			0.26			0.30		

Table 3.9 (continued): Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth, Higher SES

	Model 11			Model 12			Model 13		
Fixed Effects	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
LEVEL 1									
Baseline Odds	0.000		***	0.000		***	0.000		***
Race/Ethncity (White)									
Black	1.84	2.2	*	1.73	1.9	^	3.52	0.9	
Mexican American	2.15	2.5	*	1.81	1.6		0.10	-1.1	
LEVEL 2									
Race/Ethnic Specific Sex Ratio of Employed Men (logged)	0.91	-0.1		1.17	0.2		0.78	-0.4	
Race/Ethnic Specific Unemployment	1.12	3.7	***	1.13	3.8	***	1.13	3.7	***
Female Labor Force Opportunity Index	1.11	1.0		1.21	1.7	^	0.99	-0.1	
Percent in Low Quality Jobs	1.03	1.9	^	1.04	2.0	*	1.04	2.2	*
Residential Stability	1.02	1.6		1.02	1.3		1.02	1.4	
Proportion Foreign Born (logged)				0.77	-2.5	*			
Proportion Foreign Born*Black				1.22	1.7	^			
Proportion Foreign Born*Mexican American				1.38	1.3				
Proportion Males Employed Full Time							1.03	1.6	
Full Time*Black							0.99	-0.6	
Full Time*Mexican American							1.06	1.5	
Random Effects									
Intercept	1.32	5.5	***	1.20	5.3	***	1.25	5.4	***
Intraclass Correlation Coefficient	0.29			0.27			0.28		

***p<.001, **p<.01, *p<.05, ^p<.10

Note: Models control for all other individual level factors

n=32,931 person half years

Chapter 4: Race/ethnic differences in non-marital fertility: Socialization Mechanisms

4.1 Introduction

The fundamental question of this dissertation involves the sequencing of family formation behaviors. Why are some groups of women, and in particular Mexican American women, more likely to begin their 'pathway' through adulthood with a birth rather than with marriage? The persistence of race/ethnic differences in non-marital fertility despite controls for individual characteristics, has spurred a large amount of research looking at the role that contextual factors have on the risk of a non-marital birth (Wilson 1987; South 1996; South and Baumer 2000; Erickson 1998; South and Crowder 1999; Hogan and Kitagawa 1985; Butler 2002; Sucoff and Upchurch 1998; Stier and Tienda 1997; Moore and Chase-Lansdale 2001; South 1999; Billy and Moore 1992; South and Lloyd 1992a; Brooks-Gunn, Duncan, Klebanov, and Sealand 1993). As discussed in the last chapter, research on urban poverty and the family generally focuses on two sets of mechanisms linking context to individual behavior, instrumental mechanisms which describe how individual agency is limited by community level opportunity structures and socialization mechanisms which describe how communities socialize those who grow up or live in them (Small and Newman 2001).

The last chapter focused specifically on the relationship between instrumental mechanisms, as measured by a variety of economic and demographic characteristics at the county level, and non-marital fertility rates. These factors, particularly the race/ethnic specific unemployment rate, were significantly associated with non-marital fertility rates though they played a more critical role in explaining race/ethnic differences among women of higher socioeconomic status. These findings partially support the hypothesis that the economic vitality and industrial composition of an area are linked to the life course trajectories of women. An additional way to look more closely at race/ethnic differences in non-marital fertility is to look at the role of contextual factors measured on a smaller spatial scale, at the level of the neighborhood.

The current chapter focuses more closely on the role of context as measured at the level of the census tract. This scale is ideal to look at the impact of what Small and Newman (2001) call socialization mechanisms. Socialization mechanisms are a critical component of explanations linking context to marriage and non-marital fertility, and focus on how individuals are socialized within more localized areas such as neighborhoods (Wilson 1987; Billy, Brewster and Grady 1992; Brewster 1994a; Brewster 1994b). As Billy and Moore (1992: p. 980) state, "characteristics of communities influence reproductive behavior...by giving rise to social norms that influence the psychic costs and preferences for engaging in various reproductive behaviors by defining the boundaries of permissible or desirable behaviors".

Research suggests that neighborhood disadvantage may in part impact non-marital fertility through the development of *alternative* normative scripts for the timing and sequencing of life course events (Forste and Tienda 1996; Erickson 1998; South and Crowder 1999; Wilson 1987; Butler 2002; Hogan and Astone 1986). These alternative scripts may shape the family related behavior of individuals in two ways, *directly* and *indirectly*. As Butler (2002: 29) argues, "norms may prescribe a behavior and thus put social pressure on members of the community to behave accordingly. Second, norms may prescribe other behaviors that in turn influence the behavior of interest." Given this perspective, local norms surrounding the timing, sequencing, and acceptability of family behavior such as marriage, childbearing, and divorce will *directly* impact the non-marital fertility behavior of women in those communities. Chapters 2 and 3 confirm that school enrollment and employment lower the risk of having a non-marital birth. So, to the extent that norms surrounding the work and schooling expectations of men and women impact their actual work and schooling experiences, these norms will *indirectly* impact non-marital fertility rates.

Most research looking at Black/White differences in family formation argues that any normative differences that exist between groups arise in response to socioeconomic discrepancies and are not due to internalized individual traits (Jargowsky 1997; Wilson 1987; Anderson 1990; Geronimus 1987; Stack 1974). This is not the case for research on the Mexican American population which often emphasizes normative differences resulting from a more familistic culture; a culture

that stresses a strong orientation to marriage, motherhood, and fidelity and discourages overt sexuality for women (Erickson 1998; Flores et al.1998; East 1998). Some researchers argue that neighborhoods with higher levels of ethnic concentration may promote this familistic culture among Mexican Americans and serve as a buffer against the deleterious outcomes associated with neighborhood disadvantage (Upchurch et al. 2001; Denner, Kirby, Coyle, and Brindis 2001).

This chapter builds upon the previous chapter and explores the impact of direct, indirect, and familistic *socialization mechanisms* on non-marital fertility and race/ethnic differences in non-marital fertility, with particular focus on Mexican American/White differences. However, it is important to remember that the instrumental mechanisms and the socialization mechanisms are not independent of one another,

> The normative environment and local opportunity structure are intertwined in complex ways, such that each may shape or be shaped by the other…. If, for example, labor market conditions suggest to adolescents a small likelihood of attaining their occupational aspirations, it may be more difficult for a community to maintain or enforce norms prescribing appropriate paths to adulthood (Billy, Brewster, and Grady 1994: 389).

This interdependence is often brought up when discussing early (and often non-marital) childbearing among Black women. Research suggests that early childbearing may be normative in this population, yet it also suggests that these norms have emerged in response to the structural disadvantage minority women face (Geronimus 1987; Stack 1974). While this may make distinguishing the impact of these two factors difficult empirically, they are conceptually distinct.

I adopt the perspective put forth by Billy and Moore (1992) and Billy, Brewster and Grady (1994), which argues that community level opportunities and norms should be conceptualized at two different spatial levels. In the last chapter, the instrumental mechanisms were measured at the level of the county. In this chapter, neighborhood level socialization mechanisms are measured at the level of the census tract as "norms pertaining to reproductive decisions are more likely to be generated by the properties of neighborhoods, which are relatively homogenous, than by those of larger areal units" (Billy and Moore 1992: p. 985). Because census tracts are largely demographically homogenous and generally have between 3,000 and 8,000 residents they are considered to be the best operationalization of neighborhood (Sampson 1997; Upchurch et al. 2001). Though instrumental mechanisms measured at the tract level are likely to impact non-marital fertility rates, research has generally considered the census tract too small of a spatial scale to measure the influence of broader economic and structural factors on family formation (Abma and Krivo 1991; Lichter et al. 1992; Billy and Moore 1992; Billy, Brewster, and Grady 1994). This chapter operationalizes the direct and indirect socialization mechanisms using both demographic characteristics and patterns of behavior observed in census tracts.

4.2 Background

As documented by Pagnini and Rindfuss (1993), childbearing outside of marriage was viewed as deviant for much of the 20th century. As marriage and childbearing have become increasingly separated, the legal and social stigma of

having a child out-of-wedlock has declined. However, there are still substantial race/ethnic differences in non-marital fertility, which make it clear that marriage and childbearing have become separated more for some groups than for others.

East (1998) argues that though the scheduling of life events is well defined for men and women in modern society and despite the fact that they choose when to marry or have a child, they are influenced by socially proscribed norms surrounding the ordering of those behaviors. The relatively greater separation of marriage and childbearing among minority women relative to White women implies normative differences in the meaning and value of marriage relative to childbearing (Forste and Tienda 1996). There are arguably different cultural expectations about the ordering of these life course events (Hogan and Astone 1986; East 1998; Stier and Tienda 1997; Erickson 1998; Stack 1974; Geronimus 1987; 1991; Forste and Tienda 1996). For example, East (1998) finds that Black women perceive the greatest likelihood of having a non-marital birth while Hispanic women desire the earliest transitions to marriage and motherhood. Additionally Hispanic women are more likely to expect a non-marital birth than White women, particularly Hispanic women born in the U.S. This is true even when many individual and family level characteristics are controlled. To the extent that expectations of life course events are shaped by local norms, race/ethnic differences in these expectations may reflect different normative environments.

Others have also discussed the role of non-economic reasons for race/ethnic differences in family formation processes. Looking in particular at the rise in single parenthood among Black women, Jencks (1992) argues that though a shortage of employment opportunities for men, and thus a shortage of marriageable men, did affect the likelihood of marriage among Blacks, employment opportunities did not change enough to account for the huge rise in single parenthood after 1970. He argues that marriage must have been losing its appeal for non-economic reasons as well and that researchers need to take into account broader cultural change in addition to demographic and economic factors.

4.2.1 Neighborhood Disadvantage, Normative Climate, and Non-Marital Fertility

Spurred in large part by Wilson (1987), researchers have argued that disadvantaged neighborhoods may foster a 'culture', or normative climate, less critical of non-normative behaviors, including non-marital childbearing. As a result, individuals residing in these neighborhoods are at an increased risk of engaging in these non-normative behaviors.

In *The Truly Disadvantaged*, Wilson (1987) argues that economic restructuring in urban areas led to a decline in economic opportunities for poor men, this in turn led to a decline in marriage and rise in non-marital fertility. This relationship was explored in the previous chapter. However, a critical component of his argument linking context to decreased marriage and increased non-marital fertility focuses on the importance of positive adult role models for men and the attendant

cultural climate. Individuals in disadvantaged communities, he argues, become increasingly isolated from mainstream society as the social organization of the inner cities declines. This *social isolation* that emerges in response to social structural constraints and limited opportunities has a profound impact on local norms. This occurs, in large part, because of a lack of positive role models that keep "alive the perception that education is meaningful, that steady employment is a viable alternative to welfare, and that family stability is the norm not the exception" (p. 56). These perceptions contribute to the development of a 'culture' that, in turn, indirectly and directly increases the likelihood of engaging in non-normative behaviors, including having a child out-of-wedlock.

Wilson (1996: p. 66) defines 'culture' as "the sharing of modes of behavior and outlook within a community." He argues that all people within a broader society share common modes of behavior and outlook; however there exists variation in the culture of subgroups within society,

> Communities differ with respect to outlook and behavior…in part [based] on the degree of the group's social isolation from the broader society, the material assets or resources they control, the benefits and privileges they derive from these resources, the cultural experiences they have accumulated as a consequence of historical and existing economic and political arrangements, and the influence they wield because of those arrangements (p. 66).

It is important to note that this perspective is distinct from that which suggests that the values of the 'ghetto poor' are at odds with mainstream values. Wilson (1996) argues that much of the 'ghetto related' behavior occurs, despite the fact that

individuals agree with mainstream values, because individuals are so constrained by their circumstances and more often have to violate their norms. However, he also argues that sometimes the decision for individuals to behave in ghetto related ways is cultural. The more often a non-normative behavior occurs, the more tolerant individuals become of it as "they may endorse mainstream norms against this behavior in the abstract but then provide compelling reasons and justifications for this behavior, given the circumstances in their community" (p. 70).

Though Wilson emphasizes the effects of community disadvantage and lack of positive role models on the behavior of men, he does also discuss the importance of role models for women. Building on this work, other researchers argue that community disadvantage promotes alternative normative scripts regarding the timing and sequencing of life course events among women (Forste and Tienda 1996; Erickson 1998; South and Crowder 1999; Butler 2002; Hogan and Astone 1986). As Van Haitsma (1989: 27) argues, "with few visible career prospects and few 'marriageable men', young women are more likely to opt for single motherhood as a route to adulthood. The spatial concentration of such behavior creates a normative environment conducive to further behavior of the same sort." Thus, it is suggested that a lack of role models for women will also indirectly and directly shape patterns of family formation.

This perspective is supported in ethnographic work. Kaplan (1997), looking at Black teenage motherhood, argues that an often overlooked reason that Black teens

are choosing to have children is that these girls are "abandoned by the educational system and locked out of the job market" (p. 173). While some of this is structural, much of it has to do with relationships that develop in the communities where these girls live. She describes an educational system that does not encourage or expect success from these girls. Teacher/student relationships are weak and school resources are often sorely lacking. Additionally, with few successes to provide guidance, the girls in these communities see the road to achievement as too difficult. Thus, unwed motherhood is indirectly impacted by local educational expectations.

Research similarly suggests that an alternative normative climate may exist for Latina women. Erickson (1998), looking at adolescent Latina women in southern California, suggests that there exists a normative environment for disadvantaged Latina teens within the United States less critical of premarital sex and out-of-wedlock births. This climate encourages a strong adherence to traditional female roles, yet proposes a timing and sequencing of events that is distinct from both the middle class White culture and the middle and upper class Latin American culture. She writes that, "teenage pregnancy may be more culturally acceptable within the Latino community, signaling the girl's transition to adulthood rather than being considered a mistake" (p. 34). Erickson suggests that this pattern of early and premarital fertility may have developed partly in response to the bleak life opportunities available to these women. This is similar to the proposition put forth by Stack (1974), followed by Geronimus (1987; 1992), that early, and often non-marital,

childbearing may be an adaptive strategy adopted in the face of severe disadvantage in certain Black communities. Additionally, as discussed in Chapter 2, some researchers argue that the experience of Mexican Americans in the U.S. has led to the emergence of a reactive ethnicity or oppositional culture in Mexican American communities that rejects educational achievement and devalues schooling among adolescents (Dietrich 1998; Portes and Rumbaut 2001).

To the extent that neighborhood disadvantage fosters alternative normative environments for the men and women who live in them, community differences in normative climates may in part account for race/ethnic differences in non-marital births. Empirically, these relationships are somewhat difficult to measure because normative climate is so difficult to operationalize, particularly with available contextual data. However, research has lent support to these assertions (Brewster 1994a; Brewster 1994b; Billy, Brewster, and Grady 1994; Hogan and Kitagawa 1985; Billy and Moore 1992, South and Crowder 1999; Butler 2002; Baumer and South 2001). Measures of neighborhood disadvantage, primarily intended to proxy the absence of male role models, vary across studies. Some research uses community level poverty rates, some use mean housing values, and some use indices that combine multiple factors. Nonetheless, whichever measure used, research finds that increased neighborhood disadvantage is associated with earlier sexual activity among teens (Brewster 1994a; Brewster 1994b; Billy, Brewster, and Grady 1994; Hogan and Kitagawa 1985), an increased number of sex partners and decreased use of

contraceptives (Baumer and South 2001), decreased marriage (South and Crowder 2000, South and Crowder 1999) and increased non-marital fertility (Billy and Moore 1992, South and Crowder 1999). There is some evidence that differences in neighborhood disadvantage do explain at least a small part of the Black/White difference in non-marital fertility.

Studies focusing on more specific community characteristics, such as female labor force participation and youth idleness, find that contextual variables are significantly associated with the risk of first sex net of neighborhood socioeconomic status (Brewster 1994a; Brewster 1994b; Billy, Brewster and Grady 1994). Billy and Moore (1992) find that such factors as the female unemployment rate, the proportion of women of childbearing age, and the child/woman ratio are all significantly related to the risk of a non-marital birth. While these findings may in part reflect structural differences in these neighborhoods, they argue that they may also reflect normative differences. Though much of this work does not focus specifically on race/ethnic differences in family formation, in some studies Black/White differences are narrowed with the inclusion of these variables (Brewster 1994b; Baumer and South 2001).

Two recent studies have tried to measure normative context more directly. Butler (2002) uses attitudinal data from the GSS to measure the normative climate surrounding premarital childbearing. She finds that women in more tolerant climates have a higher risk of a non-marital birth. However, one serious limitation of this

work, which she acknowledges, is that the regions used to define community were very large (for Blacks only 10 nationwide regions were created). This violates the assumption that the relevant reference group is likely to be the one a person comes into contact with daily. Baumer and South (2001), looking at the transition to first sex, find that attitudes and aspirations regarding premarital sex and education measured at the zip code level are associated with an increased risk of sex (as well as with the risk of unprotected sex, frequency of sex, and number of sex partners), however these relationships are weakened with the inclusion of individual variables.

The research discussed above is motivated by theories that have generally focused on the effects of concentrated urban poverty on the family formation patterns of Black women. Little research has looked at the relationship between neighborhood disadvantage and family formation among Mexican American women. However, Mexican Americans have also experienced what Wilson argues leads to subgroup variation in culture. They have experienced social isolation, have fewer material assets or resources than Whites, and gain fewer benefits and privileges from these resources. Additionally, they have a political and economic history in the U.S. that some would argue has uniquely shaped Mexican American culture (Keefe and Padilla 1987). Some studies have added controls for being Hispanic or Latina (e.g. South 1999; South and Crowder 1999) yet do not focus specifically on discussions of Hispanic behavior. Other research focuses more specifically on the timing to first sex (Upchurch et al. 1999; Doty and Upchurch 2003) or on marriage (Oropesa et al.

1994). The one study that looked at the relationship between community context and non-marital fertility among Latina women used the PUMS, was limited to the greater Los Angeles area, and focused specifically on the availability of 'marriageable men' in the entire LA area (Catanzarite and Ortiz 2002). In this study, Catanzarite and Ortiz (2002) found that controlling for the availability of marriageable men reduces White/Latina differences in single motherhood and they suggest that this in part operates through the perpetuation of different norms regarding out-of-wedlock-childbearing.

The first two research questions in this chapter attempt to fill the gap in this literature by looking at the direct and indirect links between normative climate and non-marital fertility, paying particular attention to Mexican American women. Specifically, the questions are:

Q1. To what extent are differences in the non-marital fertility rate among Blacks, Mexican Americans and Whites attributable to differences in the presence of neighborhood role models that encourage educational achievement and stable employment (indirect influences)?

Q2. To what extent are differences in the non-marital fertility rate among Blacks, Mexican Americans and Whites attributable to a difference in the presence of neighborhood role models that encourage marriage and more conventional trajectories of family formation (direct influences)?

4.2.2 Neighborhood Context - Hispanics

The above questions draw from theory and research focused primarily on Black family formation in order to look at the non-marital fertility of another minority group, Mexican Americans. However, as discussed in the last chapter, the experience of Hispanic populations within the U.S. is clearly distinct from that of Blacks and thus there is some question regarding whether or not these theories can be applied to Hispanics (Moore and Pinderhughes 1993). While there are arguably reasons to think they can, Moore and Pinderhughes (1993), and the contributing authors to the volume they edit, suggest that male full time employment, residential stability, and immigration/ethnic concentration are additional factors that need to be taken into account when looking at Hispanic populations. While these relationships were explored at the broader county level in the previous chapter, there is reason to expect that these might additionally operate at the more localized tract level.

Wilson argues that joblessness is a key factor in neighborhood disadvantage leading to a lack of male role models. However, as discussed above, Mexican American men have high levels of underemployment rather than unemployment. Thus, a measure of underemployment may better capture the reality of available role models for Mexican American men. In the previous chapter, residential stability and higher proportions of immigrants were hypothesized to promote a strong sense of community among the disadvantaged, in contrast to the social isolation experienced by Blacks (Gonzales 1993, Valdez 1993; Rodriguez 1993). These would actually

offer Mexican American women protection from the effects of community disadvantage. These arguments are inherently more cultural than structural in nature and are thus better operationalized at a smaller spatial scale.

Of particular importance for this chapter is immigration. In addition to structural arguments linking high immigration to economic vitality (Rodriguez 1993), high levels of immigration are argued to promote a stronger sense of ethnic heritage and strong social ties. This argument is similar to those that suggest ethnic concentration may actually protect Mexican American women from some of the deleterious outcomes generally associated with higher levels of poverty, such as non-marital births. This research emphasizes normative differences among Mexican Americans resulting from a more *familistic* culture. This perspective draws from a literature which suggests that Mexican Americans are very family oriented, more emotionally bound to extended family and children than are Whites and that they are unusually warm, caring, and protective of their family (Del Castillo 1984, Vega 1990). Ethnographic research documents ideals among women that stress a strong orientation to marriage, motherhood, and fidelity and discourage overt sexuality, either within or outside of marriage (Erickson 1998; Flores et al. 1998). Furthermore, research suggests that Mexican origin women hold more pro-nuptial orientations (Oropesa 1996; Upchurch et al. 2001) and more traditional orientations to motherhood and domestic roles (Guendelman, Malin, Herr-Harthorn, & Vargas 2001) than do non-Hispanic White women.

While assimilation theory suggests that these are characteristics of an individual that may weaken over time in the U.S. or across generations, it is clear that this familistic orientation may have a broader level of influence. Neighborhoods with large Hispanic populations or large immigrant populations may foster a more 'traditional' normative orientation than those that are more integrated. Empirical research lends some support to this argument. For example, Upchurch et al. (2001) find that Hispanic teens living in neighborhoods with a low density of Hispanics have a significantly higher risk of sex than those in higher density neighborhoods. Additionally, Denner et al. (2001) find that zip codes with low adolescent birthrates had a higher percentage of residents of Latino descent. Living in ethnically homogenous neighborhoods mean that contact is maximized with other co-ethnic group members who share sub-cultural institutions and values, which may promote pro-nuptial and pro-natal behavior.

This discussion motivates additional research questions that will be addressed in this chapter:

Q3. To what extent do differences in rates of male full time employment, residential stability, the concentration of immigrants, and the concentration of the Hispanic population at the census tract explain (or suppress) differences in the non-marital fertility rate between Mexican Americans and Whites in particular?

The discussion so far has emphasized how neighborhood socialization mechanisms may directly and indirectly impact non-marital fertility, how the

overrepresentation of minority women in neighborhoods with alternative normative climates may account for some of the race/ethnic difference in non-marital fertility, and how Mexican American non-marital fertility may be additionally impacted by the levels of male underemployment, residential stability, and immigrant/ethnic concentration in a neighborhood. This chapter will explore the questions raised by this discussion. However, it is also expected that these relationships will vary by individual socioeconomic status.

Previous chapters document that race/ethnic differences in non-marital fertility rates vary by individual socioeconomic status. Additionally, Chapter 3 documents that instrumental mechanisms measured at the county level are more strongly associated with the non-marital fertility of higher socioeconomic status women. This finding was somewhat counter to expectations, as Wilson (1987) suggested that poor women would fare much worse in high poverty communities than in low poverty communities. However, it may be the case that when measured at the level of the census tract, the relationship Wilson predicts holds. When Wilson makes the argument that poor women will fare worse in poor communities than in less poor communities, he is talking about a concentration effect that results in part from a change in local norms. As the normative climate is arguably better operationalized at the level of the census tract as opposed to the county, I explore whether or not the effects of socialization mechanisms on non-marital fertility vary by individual socioeconomic status. I do this in two ways. First, I explore individual interaction

terms for each of the neighborhood level characteristics across individual socioeconomic status. Secondly, I look at the above research questions separately by socioeconomic status.

In summary, this chapter looks closely at the relationship between neighborhood socialization mechanisms measured at the level of the census tract and overall levels of non-marital fertility. It is expected that mechanisms which directly and indirectly shape family formation will maintain an independent relationship with non-marital fertility controlling for individual characteristics and structural characteristics measured at the county level. To the extent that an alternative normative climate emerges in response to community level disadvantage, these socialization mechanisms should mediate the relationship between community disadvantage and non-marital fertility. In this chapter, I pay particular attention to the non-marital fertility of Mexican American women. Does the fact that Mexican American women live disproportionately in disadvantaged tracts, characterized by alternate normative climates and a lack of role models, contribute to higher non-marital fertility relative to White women? I also explore whether factors thought to particularly impact Mexican American women protect them from the increased risk of non-marital fertility associated with disadvantage. Lastly, I specifically explore Wilson's claim that poor women fare particularly poorly in disadvantaged communities.

4.3 Data and Methods

This chapter uses the 1995 NSFG and the NSFG-CDF to conduct event history analyses modeling the effects of neighborhood context on the risk of a non-marital birth. To measure the non-marital fertility rate, a person half-year file is created in which observations are censored at first premarital birth, marriage, or date of interview. This sample consists of 64,811 person half-years contributed by 4,733 women since 1985: 3,172 non-Hispanic Whites, 1,193 non-Hispanic Blacks, and 368 Mexican Americans. As in the previous chapters, a dichotomous variable is created that takes on a value of 1 if a first premarital birth occurred within that six-month period. Race/ethnicity is represented by three dummy variables: White, Black, and Mexican American, including both native born Mexican origin women and those who immigrated to the U.S. before age 12 (the 1.5 generation). Models control for religious background, parental education, and family structure as well as for time-varying measures of cohabitation status, school enrollment, full time and part time employment.[18]

4.3.1 Tract Level Measures

Three sets of variables are used to measure the role of socialization mechanisms on non-marital fertility. As discussed in the introduction, socialization mechanisms are conceptualized to operate at the more localized neighborhood level and thus are measured at the level of the census tract. The first set includes variables

[18] The data, the construction of the data file, and the individual level variables are described in more detail in Chapter 2 and Chapter 3.

that attempt to capture overall neighborhood level disadvantage as well as the presence of a normative climate that may *indirectly* influence the family formation behavior of men and women by shaping their schooling and work behavior. The second set of variables attempts to measure the presence of a normative climate that more *directly* shapes the family formation behaviors of men and women. A third set of variables measures the contextual characteristics Moore and Pinderhughes (1993), among others, identify as particularly important for Hispanic populations. These variables are listed in Table 4.1.

Wilson (1987) argues that disadvantaged neighborhoods contribute to a 'culture' characterized by a lack of role models that encourage marriage and employment for men. As discussed above, measures of neighborhood disadvantage, intended to proxy the absence of male role models, vary across studies. In this chapter I use a measure of neighborhood disadvantage constructed by South and colleagues in a series of articles, the Neighborhood Disadvantage Index or NDI (South 1999; South and Crowder 1999; Baumer and South 2001). While this measure includes explicit measures of male unemployment, it also includes other indicators of local opportunity structure and overall disadvantage that Wilson (1987) identifies as important in the identification of disadvantaged neighborhoods. Additionally, as South and Crowder (1999:117) argue "a composite index, rather than a single indicator, can more accurately register differences among neighborhoods in socioeconomic status". The six measures used to construct the index are: 1) the

poverty rate, 2) the percentage of households that receive public assistance, 3) the male unemployment rate, 4) the percentage of families without high incomes (less than $60,000 in 1990), 5) the percentage of persons aged 25 and older without a college degree, and 6) the percentage of workers who are not in managerial or professional occupations. These variables are individually standardized (mean of 0 and standard deviation of 1) and summed to create an index (alpha = .898) with an overall mean of zero, where positive values represent higher than average tract level disadvantage.

Three other variables are used to measure the presence of neighborhood role models that encourage educational achievement and stable employment for men and women: youth idleness, the proportion of women aged 16 and older who are in the labor force, and the proportion of youth enrolled in school. Youth idleness measures the percent of youth in a tract without a high school diploma that are not in school or in the paid labor force. This measure was used by Brewster (1994a; 1994b) as an indicator of drift from mainstream norms surrounding work and schooling. High levels of labor force participation may affect women's perceptions of work and define it as an acceptable or expected role for women (Billy and Moore 1992). Additionally, regardless of one's own career expectations, low levels of labor force participation may indicate to women that the likelihood of attaining employment is low. School enrollment among adolescents may similarly affect perceptions and expectations of educational attainment. Kaplan (1998) attributed teenage fertility, among Black

women in the community she studied, in part to the fact that these women were shut out of the educational system. Erickson argues similarly for Latina women (1998). This may occur for a variety reasons, however Kaplan and Erickson both suggest that poor minority women in schools with limited resources are routinely discouraged and held to low academic expectations. This in turn contributes to high drop out rates. Schooling and potential educational attainment are strongly associated with fertility. However, women who live in neighborhoods with low levels of school enrollment may perceive the costs of fertility to be less if educational expectations are not very high.

The second set of variables attempts to measure aspects of the neighborhood context that more directly shape men and women's expectations regarding family formation behaviors. Three variables are measured: the male marriage rate, the proportion of women that are divorced or separated, and the non-marital birth rate of women aged 15-24. The male marriage rate measures the proportion of men in each census tract that are married with a spouse present. It is expected that women living in communities with a lower male marriage rate will be at an increased risk of a non-marital birth. The proportion of women divorced or separated may give some indication as to the stability of marriage. To the extent that relationships are not perceived as very stable, women may not wait until marriage to have a child. Additionally, women may not want to raise children in a relationship that is perceived as chaotic and unstable (Billy and Moore 1992). The non-marital fertility rate at the

aggregate level may give women a general indication of the costs associated with out-of-wedlock childbearing. It is expected that women living in neighborhoods with higher levels of separation and divorce as well as higher levels of non-marital fertility will be at a greater risk of having a non-marital birth. All of the variables are measured at the level of the census tract with the exception of the non-marital birth rate. The NSFG-CDF used data from the National Center for Health Statistics Natality Tapes in order to construct this measure, and it is only available at the county level.

As in the last chapter, a third set of variables measures the characteristics identified by the research in the Pinderhughes and Moore (1993) volume as particularly relevant for the Mexican origin population. The rate of male full time employment measures the intermittency of work available to men in each census tract. To the extent that local levels of underemployment shape men's expectations regarding their likelihood of stable employment, this measure may capture a different aspect of the normative climate than the NDI does alone for Mexican American men. Residential stability is measured as the proportion of tract residents who lived in the same house five years ago. It is important to keep in mind that this variable is somewhat different than the individual measures of residential stability used by other researchers such as McLanahan and Sandefur (1994) and South and Baumer (2000). South and Baumer (2000) suggest that frequent residential moves result in a deficit of social capital (social relations) that in turn may encourage non-marital childbearing.

However, in this case, residential stability may actually be an indicator of social organization and social control for the Mexican American population. Neighborhoods with higher stability may more effectively regulate the behavior of residents, and thus it is expected that Mexican American women in these neighborhoods will have a lower risk of a non-marital birth. Lastly, the proportion of the tract residents that are immigrants and the proportion of the tract residents that are Hispanic are used to measure the effects of immigration and ethnic concentration. It is expected that Mexican American women in neighborhoods with high levels of immigration or ethnic concentration will have lower levels of non-marital fertility.

4.3.2 Statistical Analyses

The statistical models used in these analyses are constructed to explore the primary objectives in this chapter. First, do tract level characteristics mediate the race/ethnic effect on non-marital fertility, independent of individual level characteristics? Second, do these relationships exist independently of county level measures? For the analyses, discrete-time event history models predicting non-marital fertility rates are estimated using logistic regression (Allison 1984; Yamaguchi 1991). The models are set up to allow a half-year lag between the time-varying explanatory variables and the dependent variable. Very low levels of clustering at the level of the census tract mitigate the need for multilevel models for the majority of the analyses in this chapter (Teachman and Crowder 2002). Thus, analyses addressing the first objective use logistic regression to establish the

relationship between tract level variables and the risk of a non-marital birth. The final models including tract and county level variables are estimates using multilevel methods. All of the analyses in this chapter are conducted using PROC LOGISTIC and GLIMMIX in SAS.

I first determine the baseline relationship between neighborhood context and non-marital fertility by using logistic regression to look at the effect of each tract level variable on the risk of a non-marital birth and on race/ethnic differences in the risk of a non-marital birth. I next run models that look at the joint effects of each set of tract level variables (indirect normative measures, direct normative measures, etc.) examining which relationships hold with the inclusion of individual and family characteristics. I then run multilevel models that look at the effect of all relevant tract level variables with and without county level variables to determine whether these measures maintain an independent association with the risk of a non-marital birth. Lastly, I conduct a series of analyses that look at the interaction between individual socioeconomic status and neighborhood level variables. For ease of interpretation, results are presented separately for women of higher socioeconomic status (women with at least one parent with at least some college) and lower socioeconomic status (women with no parent with greater than a high school degree).

4.4 Results

4.4.1 Descriptive Results

Figure 3.1 and Table 3.2 from the previous chapter present descriptive statistics on the dependent and individual level time-varying and time-constant individual level variables and are discussed there. Table 4.2 provides descriptive statistics for the census tracts in which these women live, by race/ethnicity. The top panel focuses on the variables used to measure characteristics of the normative climate that may indirectly affect non-marital fertility. Clearly Black and Mexican American women live in tracts that experience higher average levels of neighborhood disadvantage than Whites as indicated by the higher scores on the NDI. For a clearer sense of what this means, the next 6 rows show the distribution across each of the factors that make up the index. Mexican American and Black women are more disadvantaged than Whites across every outcome, with Blacks generally faring the worst. Mexican American and Black women also live in neighborhoods with a larger proportion of youth without high school diplomas and not enrolled in school or participating in the labor force compared to White women. In this particular case, Mexican Americans are as disadvantaged as Blacks. Lastly, Mexican American women live in the most disadvantaged neighborhoods as characterized by women's labor force participation and youth school enrollment.

The next panel focuses on the variables used to measure characteristics of the normative climate that more directly influence family formation behaviors. Mexican

American women live in neighborhoods that fall in between those of White and Black women as indicated by levels of divorce/separation, non-marital fertility, and the proportion of men married. Not surprisingly, White women live in neighborhoods characterized by the highest level of more traditionally normative family behaviors. To the extent that the normative climate of a neighborhood is associated with the risk of a non-marital birth, controlling for characteristics that both directly and indirectly affect non-marital fertility is expected to reduce race/ethnic differences in this outcome.

Turning to the bottom portion of the table, we see that Mexican American women live in neighborhoods characterized by the lowest levels of neighborhood stability while Black women live in neighborhoods that have the most stability. To the extent that this residential stability reflects Wilson's concept of social isolation, controlling for this factor should reduce Black/White differences; yet Mexican American/White differences would actually be exacerbated. However, residential stability is hypothesized to operate differently for Mexican Americans, and actually protect against neighborhood disadvantage. To the extent that this factor does protect Mexican American women against disadvantage, the lower level of residential stability may actually be disadvantageous. Not surprisingly, Mexican American women live in neighborhoods with the highest proportion of immigrant and Hispanic residents. To the extent that this concentration promotes a more familistic cultural climate and protects against neighborhoods disadvantage, controlling for this may

actually exacerbate Mexican American/White differences in non-marital fertility all else being equal. Finally, Mexican American women live in neighborhoods with male full time employment rates that fall in between those for Black and White women. To the extent that this provides exposure to conventional role models, controlling for male full time employment should reduce Black/White and Mexican American/White differences in non-marital fertility.

4.4.2 Regression Analyses – Full Sample

I next use logistic regression analyses to determine whether there is an association between each tract level variable and the risk of a non-marital first birth controlling solely for race/ethnicity. This provides descriptive information on the relationship of each tract level variable, and the broader concept each measures, to non-marital fertility and to race/ethnic differences in non-marital fertility. These results are presented as odds ratios in Table 4.3. The first model provides the baseline model with which to evaluate changes in the relationship between race/ethnicity and non-marital fertility. In this model, Black women have almost 5 times the risk of a first premarital birth and Mexican American women almost 2 and ½ times the risk compared to White women.

All of the neighborhood level variables used to measure aspects of the normative climate that *indirectly* influence family formation are significantly related to the risk of a non-marital birth and reduce race/ethnic differences in the risk. Again, indirect factors are those hypothesized to impact family formation by impacting the

work and schooling behavior of men and women. Women in tracts with higher levels of neighborhood disadvantage and youth idleness have an increased risk of a non-marital birth while women in tracts with a greater proportion of women in the labor force and youth in school have a lower risk. Of these measures, the neighborhood disadvantage index does the most to reduce race/ethnic differences in the risk of a non-marital birth.

The second panel looks at the role of variables measuring aspects of the normative climate that more *directly* shape family formation. Again, all variables are significantly associated with the risk of a non-marital birth and work as expected. Women in neighborhoods with higher rates of divorce/separation and higher non-marital fertility rates have a higher risk of a non-marital birth, while those in neighborhoods with a higher proportion of men married have a lower risk. Controlling for each of these factors reduces race/ethnic differences in the risk of a non-marital birth.

The last two panels look at the neighborhood characteristics thought to be particularly important for Mexican American women. Interestingly, only the percent of immigrants and the male full time employment rate are significantly associated with the risk of a non-marital birth. Women in neighborhoods with higher levels of male full time employment have a decreased risk of a non-marital birth and controlling for this reduces race/ethnic differences substantially. There are no significant race/ethnic differences in this effect, though the direction of the

coefficients suggests it offers less protection for minority women. Women in neighborhoods with a higher proportion of immigrants have a lower risk of a non-marital birth, however as in the last chapter, this only is true for White women. Somewhat surprisingly, residential stability and Mexican American ethnic concentration are not significantly related to the risk of a non-marital birth, for any group of women.

Clearly many of these variables are correlated with one another as well as with the characteristics of individuals who live in the neighborhoods. The next step in the analysis looks at each set of variables together with individual and family level controls to see which relationships hold. These results are presented in Table 4.4. Model 1 shows the full individual level model with no tract level measures. This model is presented in order to assess subsequent changes in the effects of race/ethnicity on non-marital fertility.

Model 2 includes the tract level variables designed to measure aspects of the normative climate that indirectly shape family formation behaviors. In this model, race/ethnic differences in the risk of a birth are substantially reduced and model fit is significantly improved over the previous model. When looked at together, only the NDI and the proportion of youth in school remain significantly associated with the risk of a non-marital birth. As discussed above, the NDI is generally used to measure Wilson's concept of neighborhood disadvantage, in particular the absence of male role models who encourage steady employment and stable families. The fact that

women in neighborhoods with increased disadvantage, as measured by the NDI, have a higher risk of a non-marital birth lends circumstantial support to this argument. Additionally, women who live in neighborhoods with a greater proportion of youth enrolled in school, net of neighborhood disadvantage, have a significantly lower risk of a non-marital birth.

Model 3 looks specifically at variables that measure aspects of the normative climate directly affecting family formation. In this case, it appears to be the behavior of women rather than men that is important. Women in neighborhoods with higher levels of female divorce and non-marital fertility are themselves at a higher risk of having a non-marital birth. The marriage rate of men is not significantly associated with the risk of a non-marital birth.

Model 4 looks at the variables identified as particularly important for Mexican American women. Model 5 then looks at the race/ethnic specific effects of tract level immigration levels. In both models the variables maintain similar associations with the risk of a non-marital birth as in Table 4.3. Living in a neighborhood with higher levels of male full time employment lowers the risk of a non-marital birth as does living in a neighborhood with a greater proportion of immigrants (again, particularly for White women). However, ethnic concentration now emerges as significant.

Women in neighborhoods with a higher proportion of Hispanics, holding the proportion of immigrants constant, actually have a higher risk of a non-marital birth.[19]

The last step in this series of analyses is to look at the joint impact of all tract level measures. Table 4.5 includes all significant tract level measures, based on the logistic regression analyses, in a multilevel model. Model 1 provides the baseline multilevel model with which to make comparisons (as estimates differ slightly between the logistic and multilevel analysis). Models 2 and 3 do not include any county level measures, and Model 4 includes the race/ethnic specific unemployment rate and county level residential stability, the two county level variables found to be significantly associated with the risk of a non-marital birth in the full sample in Chapter 3. The effect of context is hypothesized to operate on multiple spatial scales. In this chapter it is argued that the structural components of contextual effects are best operationalized at the county level while the socialization components are best operationalized at the census tract level. Including both sets of measures is expected to tap the independent effects of both components.

The discussion focuses on Models 3 and 4 as they arguably the most complete models. Looking first at Model 3 we see that of all the normative characteristics expected to indirectly or directly influence family formation, only those hypothesized to operate indirectly are significant associated with the risk of a non-marital birth, in particular the neighborhood disadvantage index and the percent of youth enrolled in

[19] This does not vary by race/ethnicity.

school. These findings suggest that most of the neighborhood measures hypothesized to have an impact on the risk of a non-marital birth do not operate independently of the neighborhood disadvantage index. Interestingly though, net of neighborhood disadvantage, women in neighborhoods with a higher proportion of youth enrolled in school have a lower risk of having a non-marital birth. Because minority women are overrepresented in neighborhoods with higher disadvantage (NDI) and fewer youth enrolled in school, controlling for these factors reduces race/ethnic differences in the risk of a non-marital birth. The percent of immigrants in a neighborhood also maintains an independent impact on the risk of a non-marital birth, but varies by race/ethnicity. Though women in neighborhoods with a high proportion of immigrants have a lower risk of birth, this is only true for White women. Ethnic composition and, perhaps not surprisingly, male full time employment are no longer associated with the risk of a non-marital birth. Together this suggests that net of neighborhood disadvantage, Hispanic or immigrant concentration does little to protect minority women from the disadvantages associated with living in more disadvantaged neighborhoods.

To determine whether these relationships hold when the differences in broader opportunity structure are taken into account, Model 4 adds the county level race/ethnic specific unemployment rate and county level residential stability. These variables are not significant when included with the all the tract level measures,

suggesting that tract level variables have a more proximate impact on the risk of a non-marital birth.

These analyses demonstrate that neighborhood characteristics are associated with the risk of a non-marital birth. In particular, women in neighborhoods characterized by higher levels of disadvantage have an increased risk of a non-marital birth. However, it is difficult to pinpoint the mechanisms that link the NDI to non-marital fertility. As conceptualized in this dissertation, tract level variables are meant to represent the normative climate and county level variables the structural. If this is correct, it suggests that the effects of normative climate dominate. However, in reality the distinction between the effects of structural and normative mechanisms is not so simple. The NDI is actually made up of structural mechanisms, measured at the tract level. It is almost certainly the case that these structural mechanisms measured at the smaller spatial scale are impacting the choices women make. This analysis cannot tease out what part of the relationship between NDI is actually due to structural or normative mechanisms. Likely both mechanisms are at work influencing the opportunities and normative climate for men and women. However, the weight of evidence presented so far suggests that the NDI is most likely measuring structural opportunity at a smaller spatial scale. The fact that none of the variables used to measure the socialization mechanisms mediate the relationship between the NDI and non-marital fertility weakens the normative argument. Though the percent of youth in school does maintain an independent effect above and beyond socioeconomic

disadvantage, it also does little to mediate the relationship between NDI and non-marital fertility. This suggests that rather than emerging in response to disadvantage, this variable is measuring yet another structural component of neighborhoods. This particular finding is interesting given that the link between educational attainment and women's life course trajectories is so strong and that this factor is particularly emphasized in ethnographic literature discussing the high non-marital fertility of disadvantaged minority women.

4.4.3 Regression Analyses – Socioeconomic Sample

As discussed in the last chapters, part of the story is missed when looking at the whole sample. In the previous chapters we saw that much of the Mexican American/White difference in non-marital fertility among women of lower socioeconomic status was do to differences in fertility within cohabiting unions. This was not true for women of higher socioeconomic status who were actually much more sensitive to the effect of instrumental mechanisms measured at the county level. It may similarly be the case that particular tract level variables do more to explain race/ethnic differences for particular sub-populations. Wilson suggests that poor women may be particularly vulnerable to neighborhood disadvantage. While this was not true for county level measures, it may be the case for more localized tract level measures. If this is the case it isn't enough to control for tract level variables, interaction terms are needed. A series of analyses (not shown) demonstrate that the main effects of the majority of the tract level measures *do not* vary by individual

socioeconomic status. However, the interactive effects (by race/ethnicity) do. Because of this, I next conduct a series of analyses that look at lower and higher socioeconomic women separately. Additionally, because we know county level variables are more important for women of higher socioeconomic status, this allows us to look more closely at the simultaneous effects of county and tract level variables in this population.

Tables 4.6 and 4.7 look at the effects of each set of tract level variables, controlling for individual level characteristics, for women of lower and higher socioeconomic status respectively. Most of the effects are similar across models and are similar to the results in Table 4.4, with some small variations. However, the most interesting points are seen in the models that include all the variables simultaneously and so I move on to a discussion of Tables 4.8 and 4.9. Model 1 of Table 4.8 presents the odds ratios from the multilevel model predicting the likelihood of a non-marital birth among women of lower socioeconomic status, controlling solely for individual level variables. This is the same model from Table 3.7. We already know that the bulk of Mexican American/White difference in the risk of a non-marital birth in this group is due to differential fertility within cohabiting unions. However, while county level variables had virtually no impact on race/ethnic differences in the risk of a non-marital birth (Table 3.8), controlling for tract level variables used to measure aspects of the normative climate that indirectly affect non-marital fertility, including the NDI, the percent youth in school, and youth idleness, substantially reduce Black/White

differences in the risk of a non-marital birth as seen in Model 2. None of the variables measuring characteristics of the normative climate hypothesized to directly impact non-marital fertility maintain an independent effect in these final models. Interestingly, one of the variables hypothesized to be particularly important for Mexican American women, male full time employment, is significantly associated with the risk of a non-marital birth, though not for Mexican Americans. And though Black/White differences in non-marital fertility are not the focus of this dissertation, it is worth discussing Model 3.

Controlling for neighborhood disadvantage, the male full time employment rate reduces the risk of a non-marital birth for White women but actually increases the risk for Black women. This is somewhat reminiscent of arguments made by South (1996) and Billy and Moore (1991), and discussed in the last chapter. Though he focuses on mate availability as a structural measure, South (1996) finds that a higher availability ratio increases the risk of marriage *and* of non-marital births for White and Black women (measured as the sex ratio in secondary schools for Black women). He suggests that the costs of a non-marital birth may be reduced when there are a large number of possible partners because women who get pregnant and have a child prior to marriage may not face as many disadvantages in future marriage opportunities. In this analysis the story is similar, though varies for Black and White women. Model 3 suggests that for Black women, the costs of a non-marital birth may

be reduced when a higher proportion of men work full time. However, this is not true for White women.

Table 4.9 focuses on women of higher socioeconomic status. Model 1 again presents results from a model with no county or tract level variables included. There is no race/ethnic variation in fertility within cohabiting unions, and the risk of a non-marital birth among Mexican Americans is almost as high as for Black women. Model 3 adds the relevant tract level variables. Regarding the first two research questions, again only variables hypothesized to indirectly impact non-marital fertility are associated with the risk of a non-marital birth, specifically the NDI. It is interesting to note that the percent of youth enrolled in school is not significant for this group of women. Of the measures thought to be particularly important for Mexican American women, neighborhood stability and the percent of immigrants in a neighborhood are important. However, the effects are somewhat counter to expectations. In this case, increased neighborhood stability is associated with an increased risk of a non-marital birth, and this does not vary by race/ethnicity. This result is more in keeping with Wilson's concept of social isolation. While White women living in a neighborhood with a high proportion of immigrants have a lower risk of a non-marital birth, this is not the case for Mexican American women, and in fact they have a slightly increased risk as seen in Model 3. Controlling for these tract level measures reduces Mexican American/White and Black/White differences in the risk of a non-marital birth substantially.

Model 4 includes the county level variables identified in the previous chapter as important for this group of women, the race/ethnic specific unemployment rate and the percent of population employed in low quality jobs. Adding these variables reduce race/ethnic differences even further. While the effects of both the tract and county level variables are reduced slightly, the tract level variables continue to exert an independent relationship with the risk of a non-marital birth suggesting that, as conceptualized here, socialization mechanisms may indeed exert an effect on family formation independent of instrumental mechanisms. However, it is important to note that we can not rule out the likelihood that these tract level variables are in fact measuring structural characteristics of the neighborhoods rather than normative characteristics, just on a smaller spatial scale that at the county level.

These analyses demonstrate that contextual level variables are associated with the risk of a non-marital birth and that controlling for these factors helps explain race/ethnic differences in this risk. This is true for women of lower and higher socioeconomic status, though there are important differences. Only tract level variables are associated with the risk of a non-marital birth for women of lower socioeconomic status, while both tract and county level variables are important among women of higher socioeconomic status. To the extent that county level variables better tap structural and economic mechanisms that limit opportunity and tract level variables tap normative mechanisms that help shape expectations and beliefs, this suggests that different mechanisms influence women based on individual

socioeconomic status. However as stated earlier, instrumental and socialization mechanisms clearly operate at many levels and the effects of each are hard to separate empirically. Thus, while the NDI may be an indicator of a lack of male role models, it is also likely measuring factors that limit the opportunity of men and women. This suggests that socioeconomic status in part determines the spatial scale at which structural opportunities are available. While the family formation behaviors of all women are shaped in part by local neighborhood characteristics; women of higher socioeconomic status are also influenced by the economic characteristics of the counties in which they live.

4.5 Discussion

This chapter focused on the role of *socialization mechanisms*, measured at the level of the census tract, on non-marital fertility and race/ethnic differences in non-marital fertility, with particular focus on Mexican American/White differences. Guided by the first two research questions, it set out to explore whether the fact that Mexican American women are concentrated in disadvantaged neighborhoods characterized by normative climates that indirectly and directly encourage certain pathways of family formation helped explain race/ethnic differences in non-marital fertility. It additionally addressed the question regarding whether measures hypothesized to be particularly important to the experience of Mexican Americans, including ethnic/migrant concentration, independently shaped their family formation. Literature focusing specifically on Mexican Americans argues that a more *familistic*

culture may protect them from the deleterious outcomes associated with neighborhood disadvantage.

Regarding the first two questions, multiple measures were used to operationalize characteristics associated with the normative climate hypothesized to indirectly impact non-marital fertility rates and to operationalize characteristics associated with the normative climate directly related to family formation. Of these, only the *indirect* measures appeared to be important. In the full sample, women in neighborhoods characterized by higher scores on the NDI had a higher risk of a non-marital birth and controlling for this factor reduced race/ethnic differences in the risk of a non-marital birth. Additionally, net of this, women in neighborhoods with more youth enrolled in school had a lower risk of a non-marital birth. It is important to remember that these effects were significant controlling for a woman's own school enrollment and employment status. More direct measures, such as the local non-marital fertility rate or marriage rate, were not significantly associated with the risk of a non-marital birth. Regarding the last question, only the concentration of immigrants was associated with risk of a non-marital birth, though not in the way hypothesized. White women in neighborhoods with a higher proportion of immigrants had a lower risk of a non-marital birth, but Mexican American women did not and even had a slightly increased risk.

There were telling differences when these questions were explored separately for women of lower and higher socioeconomic status. The NDI was the most

important tract level measure in both groups of women. However, there the similarities end. Women of lower socioeconomic status appeared to be particularly susceptible to the effect of other characteristics intended to measure the indirect effects of normative climate. In fact, in this group, youth idleness and male full time employment were also associated with non-marital fertility. Though male full time employment was hypothesized to be particularly important for Mexican American women, it affected all low SES women and arguably should be considered an aspect of the normative climate that helps shape the employment expectations of men and women. There was little Mexican American/White difference to explain among low SES women, as all of the difference was due to differential fertility within cohabiting unions. However, Black/White differences were reduced substantially with the inclusion of tract level measures. While the NDI played the largest role, other tract level measures did additionally narrow race/ethnic differences in the risk of a non-marital birth.

Different variables emerged as important among women of higher socioeconomic status. These women did not appear to be influenced by other measures of the normative climate of their neighborhoods, direct or indirect, net of NDI. This may be because they have more familial resources to draw upon. Nonetheless, Mexican American/White and Black/White differences in the risk of a non-marital birth were reduced substantially with the inclusion of tract *and* county level variables. Interestingly, it was among women of higher SES that the variables

thought to be particularly important for Mexican American women emerged as important. Living in neighborhoods characterized by high levels of residential stability increased the risk of a non-marital birth. This was counter to expectations and actually is in contrast to other work which suggests that increased mobility, rather than stability, weakens social networks and results in a lack of social control over neighborhood youth (Sampson, Raudenbush, and Earls 1997). Additionally, it was for higher SES women that the race/specific effects of immigration, discussed in the analysis of the full sample, were important.

What do these findings tell us? As conceptualized here, indirect measures of the normative climate dominate, and in particular, the NDI which is meant to proxy the availability of male role models. However, I think we must be very cautious in interpreting this effect as a normative effect. In fact, the NDI actually measures structural characteristics and is at best an indirect measure of normative climate. Additionally, with the exception of higher SES women, county level measures did not maintain a relationship with the risk of a non-marital birth. This makes it even more difficult to assert that the effect of neighborhood disadvantage is solely a measure of normative context. Individuals live within multiple contexts that operate at any number of spatial scales. The fact that labor markets are generally measured at broad spatial scales does not mean that the effects operate independently of neighborhood level disadvantage. It is likely that the NDI is in large part measuring the effects of structural and economic measures on non-marital fertility, just on a smaller spatial

scale. This assertion is further supported as none of the other measures intending to proxy normative climate mediated the relationship between NDI and non-marital fertility.

Regarding ethnic concentration, net of neighborhood disadvantage neither the percent of immigrants nor the percent of Hispanics in a neighborhood reduced the risk of a non-marital birth, for any group of women. This suggests that familism, to the extent that it is measured by ethnic or migrant concentration, is not promoting a climate that discourages non-marital fertility. However, this is not to say that ethnic/migrant concentration is not important. In fact, the percent of immigrants in a neighborhood emerged as important for Mexican American women of higher socioeconomic status, though the effect was counter to expectations. Mexican American women in neighborhoods with higher levels of immigration actually had a greater risk of having a non-marital birth than Mexican American women in neighborhoods with fewer immigrants. Why this is the case is not clear but may reflect one of several possibilities. First, it is possible that our expectations regarding the effects of familism on non-marital fertility are wrong. Perhaps the pro-natal orientation of Mexican culture outweighs the proscriptions against premarital sex. It may also be the case that increased ethnic concentration, particularly immigrant concentration, may be tapping aspects of neighborhood socioeconomic status not picked up the neighborhood disadvantage index. Massey and Denton (1993) argue

that it is segregation that leads to the concentration of poverty which results in such negative outcomes for the people residing in those communities.

Taken together, these analyses lend more weight to the suggestion that women are subject to the *structural* characteristics of their communities, measured at the census tract and county. However, socioeconomic status is important in determining the spatial scale at which these factors are important. The previous chapter offered little support for Wilson's hypothesis that poor women will do particularly poorly in disadvantaged communities, as measured at the level of the county. In this chapter we see that the non-marital fertility of lower SES women is associated with more characteristics of their neighborhood than that of higher SES women. This suggests that poor women may indeed be particularly susceptible to neighborhood disadvantage. Whatever the reason, the structural opportunities of lower SES women are better operationalized at the tract level. However, women of higher SES are additionally subject to the structural characteristics of the county in which they live. In fact, tract and county level variables do the most to explain race/ethnic differences in non-marital fertility among this group of women.

This chapter found little evidence that the normative climate of an area impacts non-marital fertility. However, the approach used in this chapter only indirectly addressed the question regarding the role of norms, as each of the tract level measures used to approximate normative climate were in fact structural measures. The next chapter attempts to look more closely at the role of attitudes and

normative beliefs on family formation paying particular attention to Mexican Americans. To do this I use a sample of unmarried mothers to look at race/ethnic differences in attitudes surrounding cohabitation related behaviors and cohabitation among unmarried mothers and at the relationship between these factors and marriage.

Table 4.1: Census Tract Level Variables

Normative Climate

Indirect

Neighborhood Disadvantage Index

Neighborhood Poverty

Proportion HH Receiving Public Assistance

Male Unemployment Rate

Proportion of HH Without High Incomes

Proportion Aged 25+ Without a College Degree

Proportion Workers Not in Managerial/Professional Occ.

Youth Idleness - Proportion Youth Not in School/Labor Force

Proportion Women Aged 16+ in Labor Force

Proportion Youth Aged 16-19 Enrolled In School

Direct

Proportion of Men Married, Spouse Present

Proportion Women Divorced/Separated

Non-Marital Fertility Rate

Other Characteristics

Neighborhood Stability - Proportion HH in Same Tract 5 Years Ago

Percent Foreign Born

Percent Hispanic

Male Full Time Employment Rate

Table 4.2: Proportion Distribution on Census Tract Level Variables, by Race/Ethnicity

	White	Black	Mexican American
Normative Climate			
Indirect			
Neighborhood Disadvantage Index*	-1.578	2.551	1.362
Neighborhood Poverty	0.084	0.197	0.159
Proportion HH Receiving Public Assistance	0.065	0.150	0.109
Male Unemployment Rate	0.061	0.120	0.092
Proportion of HH Without High Incomes	0.775	0.856	0.840
Proportion Aged 25+ Without a College Degree	0.714	0.796	0.792
Proportion Workers Not in Managerial/Professional Occ.	0.730	0.789	0.794
Youth Idleness - Proportion Youth Not in School/Labor Force	0.040	0.068	0.067
Proportion Women Aged 16+ in Labor Force	0.589	0.564	0.550
Proportion Youth Aged 16-19 Enrolled In School	0.782	0.752	0.745
Direct			
Proportion of Men Married, Spouse Present	0.588	0.441	0.517
Proportion Women Divorced/Separated	0.156	0.245	0.184
Non-Marital Fertility Rate	49.12	65.92	58.80
Other Characteristics			
Neighborhood Stability - Proportion HH in Same House 5 Years Ago	0.532	0.551	0.500
Percent Foreign Born	0.061	0.072	0.174
Percent Hispanic	0.056	0.073	0.367
Male Full Time Employment Rate	0.553	0.461	0.496

*Note: Neighborhood Disadvantage Index has an alpha of .898.

Table 4.3:Odds Ratios for the Logistic Regression Analysis Modeling the Effect of Tract Level Variables on the Risk of a Non-Marital Birth

Normative Climate - Indirect	Baseline			Neighborhood Disadvantage Index			Youth Idleness		
	odds ratio	B/s.e	p	odds ratio	B/s.e	p	odds ratio	B/s.e	p
Individual Level									
Baseline Odds	0.007		***	0.007		***	0.006		***
Black	4.76	20.2	***	3.17	13.8	***	4.32	19.3	***
Mexican American	2.44	7.1	***	1.92	5.1	***	2.27	6.5	***
Tract Level									
VARIABLE				1.08	11.5	***	1.03	6.1	***
Missing				1.14	1.3		1.02	0.2	
-2 Res Log Likelihood	8913.06			8784.43			8880.34		
Normative Climate - Indirect	Proportion Women Aged 16+ in Labor			Proportion Kids (16-19) Enrolled in School					
	odds ratio	B/s.e	p	odds ratio	B/s.e	p			
Individual Level									
Baseline Odds	0.035		***	0.045		***			
Black	4.32	19.5	***	4.37	19.8	***			
Mexican American	2.20	6.2	***	2.26	6.5	***			
Tract Level									
VARIABLE	0.97	-7.7	***	0.98	-8.0	***			
Missing	1.00	0.0		1.04	0.4				
-2 Res Log Likelihood	8853.64			8851.53					
Normative Climate - Direct	Proportion Men Married			Proportion Women Separated/Divorced			Non-Marital Fertility Rate		
	odds ratio	B/s.e	p	odds ratio	B/s.e	p	odds ratio	B/s.e	p
Individual Level									
Baseline Odds	0.015		***	0.005		***	0.005		***
Black	3.89	16.6	***	3.69	15.5	***	4.35	18.9	***
Mexican American	2.27	6.5	***	2.28	6.5	***	2.32	6.7	***
Tract Level									
VARIABLE	0.99	-5.6	***	1.03	6.6	***	1.01	3.4	***
Missing	1.02	0.2		1.03	0.3		0.84	-0.4	
-2 Res Log Likelihood	8882.47			8871.51			8901.39		

Table 4.3 (continued):Odds Ratios for the Logistic Regression Analysis Modeling the Effect of Tract Level Variables on the Risk of a Non-Marital Birth

Other County Measures	Male Full Time Employment Rate			% Immigrants			% Hispanic			% Lived in Same House 5 Years Ago		
	odds ratio	B/s.e	p	odds ratio	B/s.e	p	odds ratio	B/s.e	p	odds ratio	B/s.e	p
Individual Level												
Baseline Odds	0.022		***	0.008		***	0.007		***	0.006		***
Black	3.74	16.4	***	4.79	21.4	***	4.73	21.1	***	4.71	21.0	***
Mexican American	2.15	6.0	***	2.76	7.8	***	2.33	5.8	***	2.46	7.2	***
Tract Level												
VARIABLE	0.98	-7.9	***	0.99	-3.4	***	1.00	0.6		1.00	1.3	
Missing	1.05	0.5		0.95	-0.6		0.95	-0.5		0.95	-0.5	
-2 Res Log Likelihood	8852.0			8900.3			8912.4			8911.0		
Other County Measures - Interactions	Male Full Time Employment Rate			% Immigrants			% Hispanic			% Lived in Same House 5 Years Ago		
	odds ratio	B/s.e	p	odds ratio	B/s.e	p	odds ratio	B/s.e	p	odds ratio	B/s.e	p
Individual Level												
Baseline Odds	0.027		***	0.008		***	0.007		***	0.005		***
Black	2.81	3.3	**	4.40	15.1	***	5.19	18.9	***	4.66	4.7	***
Mexican American	2.09	1.4		2.04	3.8	***	2.15	4.0	***	2.02	1.2	
Tract Level												
VARIABLE	0.97	-5.0	***	0.97	-2.8	**	1.01	1.5		1.00	0.7	
VARIABLE*Black	1.01	0.9		1.02	1.3		0.99	-2.0	^	1.00	0.0	
VARIABLE*Mexican American	1.00	0.0		1.03	2.3	*	1.00	-0.7		1.00	0.3	
Missing	1.03	0.3		0.97	-0.3		0.95	-0.5		0.97	-0.3	
-2 Res Log Likelihood	8851.0			8894.5			8907.2			8910.1		

***p<.001, **p<.01, *p<.05, ^p<.10

Table 4.4: Odds Ratios for the Logistic Regression Analyses Modeling the Risk of a Non-Marital Birth

MODEL 1			
	odds ratio	B/s.e.	p
Individual Level			
Baseline Odds	0.020		***
Race/Ethncity (White)			
Black	4.21	14.6	***
Mexican American	1.79	3.5	***
Cohabiting prior to birth	3.92	10.8	***
Cohabitation*Black	0.55	-3.3	***
Cohabitation*Mexican American	2.30	3.0	**
-2 Res Log Likelihood	7876.735		

MODEL 2			
	odds ratio	B/s.e.	p
Individual Level			
Baseline Odds	0.067		***
Race/Ethncity (White)			
Black	3.24	11.2	***
Mexican American	1.49	2.4	*
Cohabiting prior to birth	3.73	10.4	***
Cohabitation*Black	0.61	-2.7	**
Cohabitation*Mexican American		3.4	***
Tract Level			
Neighborhood Disadvantage Index	1.066	6.0	***
Youth Idleness	0.989	-1.5	
Percent Women in Labor Force	0.995	-1.0	
Percent Kids (16-19) in School	0.989	-2.7	**
Missing Tract Measure	1.08	0.8	
-2 Res Log Likelihood	7781.9		

MODEL 3			
	odds ratio	B/s.e.	p
Individual Level			
Baseline Odds	0.016		***
Race/Ethncity (White)			
Black	3.36	11.2	***
Mexican American	1.63	3.0	**
Cohabiting prior to birth	3.81	10.5	***
Cohabitation*Black	0.60	-2.8	**
Cohabitation*Mexican American	2.38	3.2	**
Tract Level			
Percent Men Married - Spouse Present	0.998	-0.6	
Percent Women Divorced/Separated	1.015	2.4	*
Non-Marital Fertility Rate	1.004	2.4	*
Missing Tract Measure	0.96	-0.4	
-2 Res Log Likelihood	7848.9		

***p<.001, **p<.01, *p<.05

All models control for individual level variables

Table 4.4 (continued): Odds Ratios for the Logistic Regression Analyses Modeling the Risk of a Non-Marital Birth

Other Tract Measures	MODEL 4			MODEL 5		
	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Individual Level						
Baseline Odds	0.043		***	0.038		***
Race/Ethncity (White)						
Black	3.53	12.1	***	3.70	12.2	***
Mexican American	1.52	2.2	*	1.52	2.1	*
Cohabiting prior to birth	3.89	10.7	***	3.93	10.8	***
Cohabitation*Black	0.59	-2.9	**	0.58	-3.0	**
Cohabitation*Mexican American	2.41	3.2	**	2.41	3.2	**
Tract Level						
Male Full Time Employment	0.983	-5.6	***	0.983	-5.8	***
Percent Immigrants	0.982	-3.2	**	0.963	-3.2	**
Residential Stability	1.003	1.2		1.003	1.0	
Percent Hispanics	1.008	2.6	**	1.008	2.3	*
Percent Immigrants*Black				1.024	1.9	^
Percent Immigrants*Mexican American				1.026	1.8	^
Missing Tract Measure	0.996	0.0		1.023	0.2	
-2 Res Log Likelihood	7822.0			7817.5		

***p<.001, **p<.01, *p<.05, ^p<.10

All models control for individual level variables

Table 4.5: Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth, All Variables

	Model 1			Model 2			Model 3			Model 4		
	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Individual Level												
Baseline Odds	0.020		***	0.037		***	0.042		***	0.019		***
Race/Ethncity (White)												
Black	4.26	15.5	***	3.37	11.9	***	2.97	9.0	***	3.24	8.2	***
Mexican American	1.75	3.5	***	1.54	2.5	*	1.29	1.2		1.45	1.9	^
Cohabiting prior to birth	4.00	12.0	***	3.83	11.6	***	3.87	11.6	***	3.81	11.4	***
Cohabitation*Black	0.58	-3.3	***	0.63	-2.7	**	0.62	-2.8	**	0.63	-2.8	**
Cohabitation*Mexican American	2.36	3.4	***	2.53	3.6	***	2.51	3.6	***	2.58	3.7	***
Tract Level												
Neighborhood Disadvantage Index				1.08	5.3	***	1.07	5.0	***	1.08	5.2	***
Percent Youth in School				0.99	-2.7	**	0.99	-2.7	**	0.99	-2.5	*
Percent Females Divorced/Separated				0.99	-1.4		0.99	-1.2		1.00	-0.9	
Non-Marital Fertility Rate				1.00	1.3		1.00	1.5		1.00	0.5	
Male Full Time Employment				1.00	0.3		1.00	0.1		0.99	-1.1	
Percent Immigrants				0.99	-1.6		0.97	-2.5	*	0.99	-1.6	
Percent Hispanic				1.00	0.1		1.00	0.0		1.00	-0.1	
Percent Immigrants*Black							1.02	2.0	*	1.02	2.3	*
Percent Immigrants*Mexican American							1.02	1.8	^	1.00	0.3	
Missing Tract Measure				1.10	1.0		1.12	1.3		1.09	0.9	
County Level										1.01	0.7	
Race/Ethnic Unemployment Rate										1.01	1.4	
Residential Stability												
Random Effects												
Intercept	0.245	4.4	***	0.212	3.9	***	0.214	3.9	***	0.200	3.6	***
Intraclass Correlation Coefficient	0.069			0.060			0.061			0.057		

***p<.001, **p<.01, *p<.05, ^p<.10
All models control for individual level varaibles

Table 4.6: Odds Ratios for the Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth Among Low SES Women, Tract Level Measures

MODEL 1			
	odds ratio	B/s.e.	p
Individual Level			
Baseline Odds	0.022		***
Race/Ethncity (White)			
Black	3.93	11.6	***
Mexican American	1.33	1.4	
Cohabiting prior to birth	3.69	8.5	***
Cohabitation*Black	0.53	-3.0	***
Cohabitation*Mexican American	3.34	3.8	**
-2 Res Log Likelihood	5344.1		

MODEL 2			
	odds ratio	B/s.e.	p
Individual Level			
Baseline Odds	0.085		***
Race/Ethncity (White)			
Black	3.01	8.7	***
Mexican American	1.11	0.5	
Cohabiting prior to birth	3.49	8.1	***
Cohabitation*Black	0.60	-2.4	*
Cohabitation*Mexican American	3.67	4.1	***
Tract Level			
Neighborhood Disadvantage Index	1.072	5.5	***
Youth Idleness	0.982	-2.2	*
Percent Women in Labor Force	0.997	-0.5	
Percent Kids (16-19) in	0.986	-2.9	**
Missing	1.151	1.2	
-2 Res Log Likelihood	5275.7		

MODEL 3			
	odds ratio	B/s.e.	p
Individual Level			
Baseline Odds	0.023		***
Race/Ethncity (White)			
Black	2.99	8.3	***
Mexican American	1.20	0.9	
Cohabiting prior to birth	3.57	8.3	***
Cohabitation*Black	0.59	-2.4	*
Cohabitation*Mexican American	3.54	4.0	***
Tract Level			
Percent Men Married - Spouse Present	0.994	-1.1	
Percent Women Divorced/Separated	1.013	1.8	^
Non-Marital Fertility Rate	1.004	2.1	*
Missing	0.969	-0.3	
-2 Res Log Likelihood	5318.8		

Table 4.6 (continued): Odds Ratios for the Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth Among Low SES Women, Tract Level Measures

MODEL 4				MODEL 5			
	odds ratio	B/s.e.	p		odds ratio	B/s.e.	p
Individual Level				*Individual Level*			
Intercept	0.068		***	Intercept	0.025		***
Race/Ethncity (White)				Race/Ethncity (White)			
Black	3.25	9.4	***	Black	3.42	9.7	***
Mexican American	0.98	-0.1		Mexican American	0.96	-0.2	
Cohabiting prior to birth	3.62	4.0	***	Cohabiting prior to birth	3.59	8.3	***
Cohabitation*Black	0.57	-2.6	**	Cohabitation*Black	0.57	-2.7	**
Cohabitation*Mexican American	3.58	4.0	***	Cohabitation*Mexican American	3.62	4.0	***
Tract Level				*Tract Level*			
Male Full Time	0.982	-5.1	***	Male Full Time	0.970	-4.2	***
Percent Immigrants	0.983	-2.6	*	Percent Immigrants	0.983	-2.7	**
Residential Stability	0.998	-0.5		Residential Stability	0.999	-0.3	
Percent Hispanics	1.011	2.9	**	Percent Hispanics	1.011	2.7	**
Male Full Time*Black				Male Full Time*Black	1.018	2.1	*
Male Full Time*Mexican American				Male Full Time*Mexican American	1.007	0.4	
Missing Tract Measure	1.027	0.2		Missing Tract Measure	1.007	0.1	
-2 Res Log Likelihood	5304.5			-2 Res Log Likelihood	5300.0		

***p<.001, **p<.01, *p<.05, ^p<.10

All models control for individual level variables

n = 31,880 person half years

Table 4.7: Odds Ratios for the Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth Among High SES Women, Tract Level Measures

MODEL 1	odds ratio	B/s.e.	p
Individual Level			
Baseline Odds	0.008		***
Race/Ethncity (White)			
Black	4.28	9.1	***
Mexican American	3.41	4.9	***
-2 Res Log Likelihood	2514.4		

MODEL 2	odds ratio	B/s.e.	p
Individual Level			
Baseline Odds	0.019		***
Race/Ethncity (White)			
Black	3.37	7.0	***
Mexican American	3.01	4.3	***
Tract Level			
Neighborhood Disadvantage Index	1.058	2.9	**
Youth Idleness	1.009	0.7	
Percent Women in Labor Force	0.991	-1.0	
Percent Kids (16-19) in School	0.997	-0.4	
Missing Tract Measure	0.90	-0.6	
-2 Res Log Likelihood	2481.9		

MODEL 3	odds ratio	B/s.e.	p
Individual Level			
Baseline Odds	0.005		***
Race/Ethncity (White)			
Black	3.68	7.4	***
Mexican American	3.13	4.5	***
Tract Level			
Percent Men Married - Spouse Present	1.001	0.2	
Percent Women Divorced/Separated	1.014	1.2	
Non-Marital Fertility Rate	1.004	1.2	
Missing Tract Measure	0.92	-0.4	
-2 Res Log Likelihood	2509.3		

Table 4.7 (continued): Odds Ratios for the Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth Among High SES Women, Tract Level Measures

MODEL 4				MODEL 5			
	odds ratio	B/s.e.	p		odds ratio	B/s.e.	p
Individual Level				*Individual Level*			
Baseline Odds	0.010		***	Baseline Odds	0.009		***
Race/Ethncity (White)				Race/Ethncity (White)			
Black	3.67	7.7	***	Black	3.98	7.8	***
Mexican American	3.54	4.6	***	Mexican American	3.20	3.8	***
Tract Level				*Tract Level*			
Male Full Time Employment	0.984	-3.0	**	Male Full Time Employment	0.983	-3.0	**
Percent Immigrants	0.982	-1.7	^	Percent Immigrants	0.945	-2.4	*
Residential Stability	1.013	2.5	*	Residential Stability	1.012	2.3	*
Percent Hispanics	1.002	0.3		Percent Hispanics	1.000	0.0	
Percent Immigrants*Black				Percent Immigrants*Black	1.038	1.5	
Percent Immigrants*Mexican American				Percent Immigrants*Mexican American	1.075	2.5	*
Missing Tract Measure	-0.126	-0.6		Missing Tract Measure	-0.062	-0.3	
-2 Res Log Likelihood	2487.0			-2 Res Log Likelihood	2480.8		

***p<.001, **p<.01, *p<.05, ^p<.10
All models control for individual level variables
n=32,931 person half years

Table 4.8: Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth Among Low SES Women, All Tract Level Measures

	Model 1			Model 2			Model 3		
	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Individual Level									
Baseline Odds	0.022		***	0.063		***	0.053		***
Race/Ethncity (White)									
Black	4.06	12.4	***	3.04	9.2	***	3.24	9.6	***
Mexican American	1.25	1.2		0.96	-0.2		0.94	-0.3	
Cohabiting prior to birth	3.86	9.6	***	3.62	9.1	***	3.59	9.0	***
Cohabitation*Black	0.56	-3.0	**	0.63	-2.3	*	0.62	-2.4	*
Cohabitation*Mexican American	3.30	4.1	***	3.62	4.4	***	3.68	4.4	***
Tract Level									
Neighborhood Disadvantage Index				1.073	4.3	***	1.085	4.9	***
Youth Idleness				0.982	-2.3	*	0.983	-2.2	*
Percent Youth in School				0.986	-2.9	**	0.988	-2.5	***
Non-Marital Fertility Rate				1.003	1.4		1.003	1.2	
Male Full Time Employment				0.999	-0.2		0.985	-2.0	*
Percent Hispanics				1.005	1.3		1.004	1.0	
Percent Immigrants				0.990	-1.7		0.989	-1.6	
Male Full Time*Black							1.025	0.3	**
Male Full Time*Mexican American							1.010	0.7	
Missing Tract Measure				1.143	1.2		1.132	1.2	
Random Effects									
Intercept	0.30		***	0.28		***	0.27		***
Intraclass Correlation Coefficient	0.083			0.079			0.076		

***p<.001, **p<.01, *p<.05, ^p<.10
All models control for individual level varaibles
n=31,880 person half years

Table 4.9: Odds Ratios for the Multilevel Logistic Regression Analysis Modeling the Risk of a Non-Marital Birth Among High SES Women, All Tract Level Measures

	Model 1			Model 2			Model 3			Model 4		
	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p	odds ratio	B/s.e.	p
Individual Level												
Baseline Odds	0.006		***	0.003		***	0.003		***	0.001		***
Race/Ethncity (White)												
Black	5.01	11.2	***	3.64	8.3	***	3.92	8.5	***	2.09	2.9	**
Mexican American	4.41	6.4	***	3.89	5.6	***	3.38	4.5	***	2.01	2.2	*
Tract Level												
Neighborhood Disadvantage Index				1.098	4.6	***	1.093	4.4	***	1.086	4.1	***
Male Full Time Employment				1.009	1.2		1.008	1.1		1.012	1.5	
Neighborhood Stability				1.012	2.2	*	1.010	2.0	*	1.012	2.2	*
Percent Immigrants				0.987	-1.5		0.963	-2.0	*	0.963	-2.0	*
Percent Immigrants*Black							1.023	1.1		1.029	1.4	
Percent Immigrants*Mexican American							1.059	2.3	*	1.059	2.3	*
Missing Tract Measure				0.859	-0.9		0.901	-0.7		0.875	-0.8	
County Level												
Race/Ethnic Unemployment Rate										1.087	3.4	***
Percent Employed in Low Quality Jobs										1.026	1.6	
Random Effects												
Intercept	1.30	5.6	***	0.84	4.1	***	0.92	4.4	***	1.06	4.8	***
Intraclass Correlation Coefficient	0.283			0.204			0.219			0.243		

***p<.001, **p<.01, *p<.05, ^p<.10

All models control for individual level varaibles

Chapter 5: Race/ethnicity and the meaning of cohabitation

5.1 Introduction

Given the subsequent disadvantages associated with non-marital childbearing for women and their children, research has begun to focus on the trajectories of unmarried women after they have a non-marital birth (Graefe and Lichter 2002; Wilcox and Wolfinger 2004; Carlson, McLanahan, and England 2004; Waller and McLanahan 2004; Osborne 2004). Of particular interest is the subsequent likelihood of marriage among unmarried mothers as well as the stability of unions among those who do not marry (Wu, Bumpass, and Musick 2001). As Carlson et al. (2004) state, "relationship trajectories of fragile families are of considerable interest to those concerned about the long term well being of children."

Important determinants of subsequent behavior include the relationship status of the mother and biological father at the time of birth (e.g. whether they are cohabiting). Mothers in cohabiting unions with the biological father have a greater likelihood of marriage than do mothers who are dating or are just friends with the biological father (Carlson et al. 2004). However, Chapter 2 documents that cohabitation may have a different meaning for Mexican American women compared to Black and White women. High levels of fertility within cohabiting unions account for a large part of the difference in non-marital fertility rates between White and Mexican American women, particularly among those of lower socioeconomic status.

This is true despite the fact that Mexican American women are less likely to cohabit than White women. While some research examining the relationship between cohabitation and marriage has looked specifically at Hispanics, very little has looked at Mexican origin women and none has looked at the U.S. born and foreign born Mexican origin populations separately.

In this chapter I use a sample of mothers from the Fragile Families and Child Wellbeing Study in order to look more closely at race/ethnic differences in the meaning of cohabitation and the role of this family status in race-ethnic variation in non-marital fertility. I do this in two ways. I first look at race/ethnic differences in the relationship status between the mother and the biological father at the birth of their child among all women and at race/ethnic differences in attitudes surrounding cohabitation among unmarried women. Secondly, I look at the effect of cohabitation and cohabitation related attitudes on the likelihood of marriage 1 year after the birth of the child. I then determine whether there are race/ethnic specific effects of cohabitation on the likelihood of marriage.

Race/ethnic differences in cohabitation, attitudes, and the relationship between cohabitation and marriage may offer additional insight into the relative importance of minority status within the context of the U.S. compared to the role of Mexican culture. Particularly important, in the context of this dissertation, is the role of these two factors for U.S. born Mexican American women. Similarities between Black and Mexican American women may reflect minority status in the U.S. while similarities

between Mexican American and Mexican born women may reflect the effects of a shared ethnic heritage.

5.2 Background

Non-marital childbearing reduces the chances of marriage for women and is generally associated with increased family instability for children, though this varies by race/ethnicity. Graefe and Lichter (2002) find that 82% of White women, 62% of Hispanic women, and 59% of Black women who had a non-marital birth were married by age 40 compared to 89%, 93% and 76% of White, Hispanic, and Black women who did not have a non-marital birth. Hispanic women seem particularly hard hit. However, there is much variation in the relationship status among these unmarried mothers (Sigle-Rushton and McLanahan 2002).

A large portion of the increase in non-marital fertility is due to increased fertility within cohabiting unions (Bumpass and Lu 2000). This has occurred at the same time that the rate of premarital cohabitation has increased among all women (Raley 2000; Bramlett and Mosher 2001; Cherlin 1992; Bumpass and Lu 2000). Overall, roughly 12% of all births occur to cohabitors and by the late 1990's roughly 40% of all non-marital births occurred to cohabitors, though this percent was closer to 50% for Hispanics and Whites (Smock 2000; Bumpass and Lu 2000). Slightly more recent estimates using the Fragile Families data find that roughly 50% of all urban unmarried mothers are cohabiting at the time of their child's birth and roughly 1/3rd

are romantically involved with the biological father though not currently living with him (Sigle-Rushton and McLanahan 2002; McLanahan and Garfinkel 2002).

This has raised questions regarding the stability of relationships, in particular cohabiting relationships, for children born into them. In general cohabiting unions are less stable than marriages and have been becoming less stable over time (Raley and Bumpass 2003; Bumpass and Lu 2000; Manning, Smock and Majumdar 2002), though cohabiting unions with children are generally more stable than cohabiting unions without children (Brown 2000). However, unmarried parents in cohabiting relationships are more likely to marry than other unmarried parents, including those in dating relationships (Carlson et al. 2004). This corresponds with other research which finds that cohabitors in general are more likely to marry than are daters, though much of this is due to different perceptions surrounding the costs and benefits of marriage as well as differential marriage expectations (McGinnis 2003).

As discussed in Chapter 2, levels of cohabitation and the meaning of cohabitation vary across many factors, including race (Bumpass and Lu 2000; Smock 2000; Manning and Landale 1996; Manning 2001). There has been quite a bit of research that looks at where cohabitation fits into the family system (Smock 2000; Rindfuss and Vandenheuvel 1990; Manning 1993; Raley 2001; Clarkberg 1999). In general, cohabitation has been variously viewed as a stage in the process to marriage, an alternative to being single, or as an alternative to being married (that is, it works as a relatively permanent arrangement in and of itself), and where it fits seems to vary

across age and race/ethnicity (Smock 2000). In chapter 2, I find that while lower SES Mexican American women are somewhat less likely to cohabit than Whites, they have higher fertility within cohabiting unions. This ultimately results in a similar proportion of Mexican American and White children being born in cohabiting unions, but suggests that Mexican American cohabitors with children may be very different than White cohabitors with children. Lending support to this, Manning (2001) finds that births to Hispanic cohabitors are 70% more likely to be intended than are births to Whites.

Given these differences, it is likely that among unmarried mothers the effect of cohabitation on the likelihood of marriage may operate differently for Mexican origin women relative to White and Black women. Research looking at attitudes among Mexican origin or Hispanic women has generally found that they value marriage more highly than White women (Tucker 2000; Oropesa and Gorman 2000; Oropesa 1996). Part of this is due to the higher pro-nuptial values of foreign born Latinas, though native born Latinas still are more pro-nuptial than White women (Oropesa and Gorman 2000). Oropesa (1994) also found that Mexican origin women have a higher approval of cohabitation if the cohabitors have intentions to marry. Given this, cohabitation may be seen more as a stage, or stepping-stone, in the marriage process for Mexican origin cohabitors. If this is the case then Mexican origin women may be more likely to marry the father of their children than White women. However, other research suggests an alternative perspective.

As Graefe and Lichter's (2002) research demonstrates, Hispanics (the majority of whom are of Mexican origin) who have had a non-marital birth are less likely to marry by age 40 than are Whites who had a non-marital birth or Hispanics who did not have a non-marital birth. This may reflect the possibility that cohabiting unions among Mexican origin women with children tend to serve as a substitute to marriage, and again this may be particularly true for the foreign born. In contrast to much of the developed world, informal/consensual unions in Mexico are best described as surrogate marriages (Castro Martin 2002). Far from representing a new cultural arrangement, as they have been characterized in the U.S., consensual unions in Mexico have been around for centuries and represent a traditional analog to formal marriages (Solis 2004; Del Castillo 1984). Interestingly, in her research which looked at multiple marriage related attitudes, Tucker (2000) found that despite having highly pro-nuptial views ("how important is being married to you?") compared to other race/ethnic groups, Mexican origin women felt that it was the least important to get married someday. As Tucker suggests, this may reflect increasing conflict between gender roles and the increasing economic power of women. However, if cohabiting unions are considered analogous to marriage, then this may also reflect a decreased need to formalize consensual unions. If this is the case, then Mexican origin cohabitors with children may be less likely to formalize their union through marriage.

This chapter looks at race/ethnic differences in the cohabitation and relationship status of the mother and biological father at the birth of the child, at

differences in attitudes surrounding the meaning of cohabitation, and at the relationship between cohabitation and cohabitation related attitudes and the subsequent likelihood of marriage. Race/ethnic differences in these factors and relationships can offer insight into the 3rd research aim posed in Chapter 1, whether Mexican American women are affected in similar ways as Black women by their minority status within the United States, or whether a distinct ethnic heritage and/or ethnic experience independently shapes their family formation.

As discussed in Chapter 4, the race/ethnic differences in non-marital fertility make it clear that marriage and childbearing are separated more for some groups than for others. Forste and Tienda (1996) suggest that for Blacks, and to a lesser extent Hispanics, higher levels of non-marital fertility signal a weakening of the link between marriage and childbearing, more so than for Whites. They argue that in addition to economic explanations, the greater separation of marriage and childbearing among minority women implies a normative change in the meaning and value of marriage relative to childbearing. If this is the case, we might expect that cohabitation holds a similar meaning among all minority women as reflected in the prevalence of cohabitation, the attitudes surrounding cohabitation, and the relationship between cohabitation and marriage. On the other hand, to the extent that cohabitation is perceived as an acceptable alternative to marriage among Mexican origin women, stemming from an ethnic heritage more supportive of informal unions, we might expect stronger similarities between Mexican born and U.S. born Mexican

American women in the meaning of cohabitation. Certainly both factors may be shaping the meaning of cohabitation among Mexican origin women, though the relative importance of each may vary by nativity. It may be the case that, net of other socioeconomic and background characteristics, a particular ethnic heritage is more relevant for the Mexican born population while minority status is for the U.S. born Mexican American population.

5.3 Data and Methods

5.3.1 Data

In this chapter I use data from the first and second waves of the Fragile Families and Wellbeing Study (Reichman, Teitler, Garfinkel, and McLanahan 2001). This study follows a cohort of new parents (largely unmarried) and their children and is designed to look at relationships of unwed parents, family formation, and child wellbeing. The study follows roughly 3,700 children born to unmarried parents and 1,200 children born to married parents in 20 major cities in the United States. When the sample weight is applied, the data are representative of unmarried births in cities with populations over 200,000. It is important to note only16 of the 20 cities have sample weights to make analyses representative of the national population. Consequently my weighted analyses use only 3/4ths of the sample. Baseline interviews were conducted with the mothers (and fathers when possible) between 1998 and 2000 and follow-up interviews were conducted when the child was 1 year of age, between 1999 and 2002. Roughly 89% of the mothers interviewed at the

baseline were interviewed again at the 1-year follow-up. I use data from the baseline and one-year interviews with the mothers. In this chapter I focus on Non-Hispanic Black, Non-Hispanic White, U.S. born Mexican American, and foreign born Mexican origin women who were also interviewed at year 1 and included in the national sample (16 cities with sample weights). This sample consists of 2,632 mothers of which 1,997 are unmarried.[20] Throughout the rest of the chapter, I refer to U.S. born Mexican American women as Mexican American, the foreign born as Mexican born, and to both groups together as Mexican origin.

5.3.2 Variables

The dependent variable for the regression analyses is the marital status of the mother and biological father roughly one year after the child's birth. This is a dichotomous measure coded 1 if the mother and biological father are married at year 1 and 0 if not. The two primary sets of independent variables explored in this chapter are the relationship status of the mother and biological father at time 1 and attitudes regarding cohabitation. The Fragile Families' data set combines several questions on marital status, cohabitation, and type of relationship in order to create a mutually exclusive and exhaustive variable that measures the relationship status of the mother and biological father at the time of birth. These categories are: married, cohabiting, visiting (romantically involved but living apart), friends, hardly talk, never talk, and father unknown. For the regression analyses I focus on unmarried women only and

[20] 4,105 Black, White, and Mexican American women were interviewed at wave 1. Of these, only 2,923 were part of the national sample. Of these, 2,632 were interviewed at wave 2.

create two dummy variables that indicate whether they were in a cohabiting or visiting relationship at the birth of the child.

Attitudes about cohabitation related behaviors are measured with two questions regarding the importance of marriage versus cohabitation. These attitudes are assessed by the mother's agreement to two statements: 1) "It is better for a couple to get married than to live together" and 2) "Living together is just the same as being married." Responses to these statements range from 1 (strongly disagree) to 4 (strongly agree). Two dummy variables are created that take on a value of 1 if the woman expresses any agreement (3 or 4) with each statement[21].

Based on previous research, I control for a series of other sociodemographic, economic, and background characteristics of mothers and the fathers that may affect the associations between both relationship status and attitudes on the likelihood of marriage. Mother's age is specified as a continuous measure. Measures of both the mother's and father's employment and educational attainment are included. Employment for the mothers is a dummy variable that indicates whether she earned income from work in the year previous to the birth. Employment for fathers is measured by a dummy variable that indicates whether the father was working for wages in the week prior to the birth of the child. Mothers' education is measured by a dummy variable that indicates whether she has at least some college education. A similar measure is created for fathers. To measure family background, a dummy

[21] The possibility of creating a scale was explored. However, the correlation coefficient was very low suggesting that each question measures a unique aspect of cohabitation related attitudes.

variable indicating whether the mother was living with both biological parents at the age of 15 is constructed. I include a set of dummy variables that measure religious denomination. Included are measures for Catholic, Fundamentalist Protestant, Mainstream Protestant, No Religion, and Other Religion. Additionally, I include one measure of frequent attendance at religious services. This variable takes on a value of 1 when the mother indicates that she attends services "several times a month" or "once a week or more" (Wilcox and Wolfinger 2004). Lastly, because these are not just first births, I include several dummy variables which indicate whether the couple has more than one child together as well as whether each parent has other biological children with different partners. To deal with missing data I employ the same strategy used by Carlson et al. (2004). In the case where a variable has more than 10 missing cases, the missing cases are flagged with a dummy variable.

5.3.3 Analyses

I first use descriptive tables to look at race/ethnic/nativity differences in the relationship status of married and unmarried mothers at wave 1 as well as differences in attitudes surrounding cohabitation among unmarried mothers. All of these variables are measured at the time of the child's birth. I then use logistic regression (estimated with PROC LOGISTIC in SAS) to look at the association between these variables and the transition to marriage of unmarried mothers to the biological fathers by year 1. The first model looks at the baseline relationship between race/ethnicity and the likelihood of marriage. I then adjust this model to control for socioeconomic,

demographic, and background characteristics of the unmarried mothers and their partners known to be associated with the likelihood of marriage. I next look at the main effects of cohabitation and then attitudes controlling for these other background characteristics. This is particularly important as cohabitation and attitudes are also shaped by these same background characteristics. Lastly, I determine whether there are any race/ethnic specific effects of cohabitation on marriage.

5.4 Results

5.4.1 Descriptive Results

Table 5.1 looks at the romantic relationship status of mothers and the biological fathers at the time of the child's birth by race/ethnicity. The top panel looks at all mothers while the bottom panel focuses specifically on unmarried mothers. It is important to keep in mind that these are not just first births, but are representative of all births in urban areas with populations over 200,000. There are interesting race/ethnic differences in both panels. Looking first at all mothers, we see that the majority of births to Black and U.S. born Mexican American women occur to unmarried women while the reverse is true for White and Mexican born women. This certainly suggests that childbearing and marriage are the most separated for Black and Mexican American women. The proportion of births to unmarried mothers for both Mexican American and Mexican born women fall in between that of Black and White women, though the difference by nativity is quite substantial. Overall, Mexican American women are most likely to have a birth in a cohabiting union (31%) and

Black women are the most likely to have a birth while in a visiting relationship with the biological father (33%). Because we know that Mexican American women are less likely to cohabit than White women, this table indirectly confirms that the fertility rate within cohabiting unions is much higher for Mexican American women.

Looking specifically at unmarried mothers we see that the majority of unmarried births to all but Black women occur in cohabiting unions. In this, Mexican American and Mexican born women are virtually identical. Though this proportion falls in between that for Black and White women, it is closer to that for White women. As documented in previous research, we see that the majority of births to Black women actually occur in visiting relationships. Interestingly, Mexican American women have a relatively high proportion of births born in this state compared to White and Mexican born women. However, roughly 27% of births to unmarried Mexican born women occur in non-romantic relationships compared to between 16 and 19% for the other groups of women. All together, this table demonstrates that while Mexican American mothers are more similar to Black women in the likelihood of being unmarried, among unmarried mothers Mexican American and Mexican born mothers are relatively similar to each other, particularly in the likelihood of being in a cohabiting union, and are generally more similar to White women. To the extent that cohabitation increases the odds of marriage, White women should be the most likely and Black women the least likely to be married within a year, with Mexican origin women falling in between. However, this assumes

that cohabitation has the same impact for all groups, a questionable assumption given the discussion above.

Table 5.2 depicts differences among unmarried mothers in cohabitation related attitudes, by race/ethnicity/nativity. Each group is somewhat unique. Black women are the least supportive of cohabitation. They are the most likely to think that it is better for a couple to marry than to live together and the least likely to view cohabitation as the same as marriage. The story is somewhat mixed for Mexican born women. While 59% of Mexican born women agree that it is better to marry than to live together, perhaps reflecting a cultural heritage that is more pro-nuptial, roughly the same percent agree that living together is the same as being married. This may come from a history that views cohabiting unions as surrogate marriages. Interestingly, White women are the least likely to agree with the statement that it is better for a couple to marry than to live together. They are also among the least likely (after Black women) to view living together the same as being married. Mexican American women appear to be the most supportive of cohabitation. They are the most likely to view living together the same as being married, and are among the least likely (after White women) to think that it is better for a couple to marry than to live together.

Table 5.3 presents descriptive statistics on the measures that will be used in the multivariate analyses. Looking at the top row, we see that Mexican born women are the most likely of unmarried parents to be married within a year of the birth of

their child (22.2%). Black women are the least likely (6.6%), with Mexican American and White women falling in between (11.0 and 13.8%, respectively). To the extent that relationship status and attitudes are related to the likelihood of marriage, race/ethnic differences in these factors may explain differences (and similarities) in the likelihood of marriage among unmarried parents. However, there may be additional race/ethnic specific effects of cohabitation on the likelihood of marriage.

The rest of Table 5.3 focuses on background variables that will be controlled in the analyses. Mexican origin women are the least likely to have worked at all in the past year and have the lowest levels of educational attainment. White women are the most advantaged on both these measures. Mexican born women are the most likely to have grown up in intact families, while Black women are the least likely. Mexican origin women are disproportionately Catholic, while the vast majority of Black women identify themselves as Fundamentalist Protestant. White women are most likely to be Fundamentalist Protestant followed by Catholic. Black women and Mexican born women attend religious services the most often with 41 and 49% attending at least several times a month or more, respectively. Turning to the biological fathers (from mother's reports), we see that Black women's partners are the least likely to be employed followed by Mexican American women and then both White and Mexican born women. Mexican origin women's partners have the lowest levels of educational attainment. Lastly, we see that Black mothers and fathers are the

most likely to have previous children with other partners while Mexican origin women are the most likely to have previous children with the same partner.

5.4.2 Regression Analyses

Table 5.4 shows the results from the logistic regression analyses. Results are presented as odds ratios. Model 1 depicts the baseline relationship between race/ethnicity and the odds of marriage. This confirms results seen in Table 5.3. Black women are less likely and Mexican born women more likely to marry than are White women. Though Mexican American women are somewhat less likely to marry than White women, this difference is not statistically significant.

Model 2 adds background characteristics, including terms for race/ethnic specific effects of family structure at age 15.[22] Of mothers' characteristics, employment, religious denomination, and frequency of religious service attendance are statistically associated with the likelihood of marriage for all women. Having been employed in the last year is associated with an increased likelihood of marriage as is increased religious service attendance. Interestingly, given the stronger pro-marriage norms of Catholicism and Fundamentalist Protestantism, women of these two denominations are less than half as likely to be married one year after their child's birth relative to Mainstream Protestants. Family structure at age 15 affects the women differently. Living with two biological parents is not significantly associated

[22] The interaction between race/ethnicity and family structure significantly improved the fit of the model as well as helps clarify the relationship between cohabitation and marriage.

with the likelihood of marriage for any group of women except Mexican Americans, for whom the likelihood is substantially increased.[23] Father's employment and increased education both significantly increase the odds of marriage. These results confirm previous research, which suggests that male employment and earnings are particularly important factors that increase the likelihood of marriage (Smock and Manning 1997; Manning and Smock 2002). Having previous children is associated with likelihood of marriage, though only when the couple shares a previous child. Having had a previous child together increases the odds of marriage by over 60%. Once we control for background characteristics, and in particular, the strong effect of living in a two parent family on the likelihood of marriage among Mexican American women, we see that Mexican American women are now substantially and significantly less likely to marry than are White women and are more similar to Black women. Mexican Born women continue to have over twice the likelihood of marrying than do White women.

Model 3 adds the main effects of cohabitation related attitudes and relationship status. Though descriptive analysis provides insight into race/ethnic differences regarding the meaning of cohabitation relative to marriage, there may be some question as to why cohabitation related attitudes would be expected to impact the likelihood of marriage. However, there is reason to think they may. Answers to these questions may reflect a certain tolerance of non-traditional family forms (at

[23] This is known from adding the main (-.49) and interactive effects (1.79) of family structure for Mexican American women.

least as defined within the United States). Additionally, previous research has documented that more positive marriage attitudes and expectations are linked to a higher likelihood of marriage even among women who already have children (Axinn and Thornton 1992; Sassler and Schoen 1999; Carlson et al. 2004; Waller and McLanahan 2004; McGinnis 2003). This is true, net of relationship status and other background characteristics. Therefore, we might expect that those who think it is better to get married than to live together be more likely to marry. In the same vein, those who agree that living together is the same as being married may be less likely to marry. However, in Model 3 we see that attitudes are not significantly related to the likelihood of marriage.[24] Additional analyses (not shown) also indicate that attitudes do not mediate the relationship between relationship status and marriage. Though there are group differences in cohabitation related attitudes, these do nothing to explain any of the group differences in the likelihood of marriage 1 year after the birth of the child.

Not surprisingly, we see that women in cohabiting and visiting relationships at the birth of the baby are over 3 times and over 2 times more likely to get married, respectively, than those not in romantic relationships. Controlling for these factors leaves race/ethnic differences in the likelihood of marriage virtually unchanged. However, the effect of being in a cohabiting relationship varies significantly by

[24] This is true even when entered into a model without measures of relationship status.

race/ethnicity as seen in Model 4.[25] The positive effect of being in a cohabiting relationship is much less for Mexican origin women than for other women, though this interaction term is only marginally significant for Mexican American women. In fact, Mexican born women in cohabiting unions are *less likely* to get married than those outside of cohabiting unions.[26] Among Mexican American women, the positive effect of cohabitation on the likelihood of marriage is only 30% that of the effect for White women. Cohabitation has the same effect for Black and White unmarried mothers. This model lends support to the hypothesis that cohabitation, when it concerns children, is more of an alternative to marriage for all Mexican origin women compared to other women, particularly for Mexican Born women, while is perhaps more a stage in the process of marriage for White and Black women.

5.5 Discussion

This chapter looked at the role that cohabitation and cohabitation related attitudes played in the likelihood of marriage. Of particular interest, in relation to the broader dissertation, is the meaning of cohabitation for Mexican American women. Is the relationship between cohabitation (or relationship status), attitudes, and marriage among unmarried Mexican American mothers similar to that of unmarried Black mothers, reflecting the influence of an overarching minority status within the U.S.? Do Mexican born and Mexican American women engage in similar behaviors and

[25] The effect of being in a visiting relationship did not vary by race/ethnicity.
[26] This is known from adding the main effect of cohabitation (2.02) and the Mexican born effect of cohabitation (-2.40).

hold similar beliefs, perhaps resulting from a shared ethnic heritage (familism)? The comparisons raised in these questions make the assumption that marriage related behavior and attitudes among Black women are not shaped by familism and that the marriage related behavior and attitudes of Mexican born women is not a response to disadvantage in the U.S. Nonetheless, given these somewhat limiting assumptions, the answers to these questions can offer insight into the future well being of Mexican American women and their children.

What do the differences and similarities between groups tell us? Certainly it is the case, as mentioned earlier, that childbearing and marriage have become separated for Black and Mexican American women more than for White and Mexican born women. The *majority* of births to Mexican American and Black women occur out-of-wedlock. However, this said, among unmarried mothers Mexican American and Mexican born women were virtually identical in the proportion of women in cohabiting unions and both tended to be more similar to White women than Black women in the distribution of relationship status.

Two hypotheses regarding the role of cohabitation among Mexican origin women were put forth. First, that a more pro-nuptial orientation may mean that cohabitation serves more as a stepping-stone on the way to marriage than it does for other groups. Second, that cohabitation, based on a history of informal unions in Mexico, may actually serve as a surrogate marriage more than for other groups. The results certainly suggest that cohabitation serves as a surrogate marriage for Mexican

born women as those in cohabiting unions are actually less likely to marry than those not in cohabiting unions. This is less the case for Mexican American women, though they were also substantially less likely to marry than White or Black women. Taken together, the main and interactive effects of relationship status on marriage indicate that though Mexican American women share some similarities with Mexican born women as well as with Black and White women, their behavior is distinct from that of other groups.

The differential importance of cohabitation independent of background characteristics suggests that other factors may in part be shaping the beliefs and behaviors of women. These may come from a shared ethnic heritage or they may emerge in response to minority status. Both factors do appear in part to shape the behavior of Mexican American women. However, the distinct pattern of behavior among Mexican American women supports other research which argues that the experience of Mexican Americans within the context of the U.S. has led to the emergence of a culture specific to Mexican Americans, one that is unique from both Mexican and mainstream U.S. cultures (Keefe and Padilla 1987). As this chapter has highlighted, it is clearly very important to look at Mexican born women and Mexican American women separately.

At the same time, one can not rule out the possibility that ethnic heritage is in part shaping Mexican American family formation and may be protecting them from the disadvantageous outcomes associated with lower socioeconomic status. However,

this chapter reminds us to be careful about our assumptions regarding Mexican ethnic heritage, or 'familism' and how it is measured. Mexican origin, Black, and White women variously behave or hold attitudes predicted by 'familism'. To assume that these behaviors or attitudes should fall disproportionately in the domain of Mexican origin women is somewhat naïve (Hunt, Schneider, and Comer 2004). Additionally, as Hunt et al. (2004) discuss in their work on the misuse of "acculturation" as a variable, familism or culture as it is generally used is poorly defined, which makes generating meaningful hypotheses somewhat difficult. In this chapter, this difficulty is evident as seen by the fact that increased marriage and increased cohabitation are both 'predicted' by familism.

In the end, cohabitation potentially plays a much more substantive role for U.S. born Mexican American women and their children than for other groups. The fact that such a large percentage of births to Mexican American women occur in cohabiting unions (31%) coupled with the fact that these cohabiting mothers have a lower likelihood of marriage than cohabiting Black and White mothers means that children have a much greater risk of spending time in a union that is subject to instability. If cohabitation serves as a surrogate for marriage for Mexican American women then these relationships may actually be relatively more stable than they are for White and Black women. The lower rates of marriage among Mexican American cohabitors coupled with attitudes generally more suggestive of cohabitation being a surrogate marriage (relative to other women) lends support to this possibility.

However, other research has documented that all children born to cohabiting parents experience similarly greater instability than those in married unions (Manning, Smock and Majumdar 2002). Additionally, Black and Hispanic children whose cohabiting parents marry still have a higher risk of seeing the union end than those whose parents did not cohabit. However, in this work Mexican Americans were not looked at independent of other Hispanics and nativity was not taken into account. Phillips and Sweeney (2003) find that Mexican origin women who have had a premarital birth have a much higher risk of marital disruption compared to those who do not, however women who cohabited prior to marriage were not at an increased risk. Though nativity was controlled, the role of these factors was not looked at separately for native and foreign born Mexican origin women. I believe my research suggests that the nativity differences are sufficient to warrant looking at Mexican American and Mexican born women separately and that we may miss important parts of the story if this is not done.

There are some important limitations that must be kept in mind. First, this chapter only looked at the likelihood of marriage to the biological father within 1 year of a child's birth. Thus, we do not know what happens in the longer term or whether the mother ultimately marries another man. However, research indicates that the risk of marriage declines the longer it has been since the birth of a child. Additionally, there is evidence that remarriage to another man is not as beneficial to children as is the marriage to the biological father. Second, this analysis looks at all unmarried

births, rather than just first births. While it may have been preferable to focus specifically on first births, limited sample size precluded this. Third, this analysis was based on a sample of unmarried mothers. Thus, any hypotheses regarding the role of cohabitation and attitudes in marriage behavior only refers to unmarried mothers.

Table 5.1: Percentage Distribution of Romantic Relationship of Parents at Birth, Married and Unmarried, by Race/Ethnicity/Nativity

All Mothers	White	Black	U.S. Born Mexican American	Foreign Born Mexican American
Married	77.0	27.2	46.1	65.8
Cohabiting	15.8	26.0	30.8	19.1
Visiting	3.3	33.1	14.0	5.8
Friends	1.3	8.3	1.9	3.9
Other	2.6	3.4	7.3	5.5
Unweighted N	782	1313	334	203

Unmarried Mothers	White	Black	U.S. Born Mexican American	Foreign Born Mexican American
Cohabiting	68.7	35.7	57.1	55.7
Visiting	14.2	45.5	25.9	16.9
Friends	5.8	11.4	3.5	11.4
Other	11.4	7.4	13.5	16.0
Unweighted N	420	1148	279	150

* Weighted Percentages

Table 5.2: Percentage Distribution of Cohabitation Related Attitudes among Unmarried Mothers, by Race/Ethnicity/Nativity

Percent that agree or strongly agree with following	White	Black	U.S. Born Mexican American	Foreign Born Mexican American
Better for couple to marry than to live together	36.8	59.4	45.5	58.6
Living together is same as being married	43.1	36.3	63.4	58.4

* Weighted Percentages

Table 5.3: Percentage Distribution of Background Characteristics among Unmarried Mothers, by Race/Ethnicity/Nativity

	White	Black	U.S. Born Mexican American	Foreign Born Mexican American
Dependent Variable				
Married by Year 1	13.8	6.6	11.0	22.2
Background Characteristics				
Mother's Age - Mean	23.4	23.6	22.8	25.1
% Mothers employed - at all, year before child's birth	83.1	80.3	71.3	59.6
% Mothers - at least some college	27.8	23.2	15.2	3.8
% Mothers - lived with two biological parents at age 15	44.0	24.0	42.8	62.3
Mother's Religion				
% Catholic	25.8	3.8	63.5	84.1
% Fundamentalist Protestant	39.6	71.6	20.5	9.3
% Mainstream Protestant	14.6	3.9	1.5	0.0
% None	15.7	13.2	11.3	5.1
% Other Religion	3.5	6.5	2.9	1.1
% Mothers - attend religious services a few times a month or more	22.3	40.9	23.5	49.3
% Fathers employed - in week before child's birth	80.1	63.8	70.0	78.2
% Fathers - at least some college	32.5	18.7	12.4	6.7
Other Children				
% Mothers - with other father	32.7	50.5	30.7	34.5
%Fathers - with other mother	30.7	48.6	36.3	23.3
% Couples - together	19.0	26.1	34.4	38.8

Table 5.4: Odds Ratios for the Logistic Regression Analysis Modeling the Entry into Marriage 1 Year After Birth of Child

	Model 1			Model 2		
	Odds Ratio	B/s.e.	p	Odds Ratio	B/s.e.	p
Baseline Odds	0.159			0.043		
Race/Ethncity (White)						
Black	0.44	-4.23	***	0.46	-3.09	**
Mexican American	0.77	-1.15		0.43	-2.25	*
Mexican Born	1.79	2.65	**	2.11	1.88	^
Relationship Status at Time 1 (Non Romantic)						
Cohabiting						
Cohabiting*Black						
Cohabiting*Mexican American						
Cohabiting*Mexican Born						
Visiting						
Cohabitation Related Attitudes						
Better for couple to marry than to live together						
Living together is same as being married						
Mother Characteristics						
Age				1.01	0.81	
Employed (not employed)				1.75	2.52	*
At least some college (hs or less)				0.92	-0.36	
Lived with 2 biolocal parents (other)				0.61	-1.50	
2 Bio*Black				1.17	0.35	
2 Bio*Mexican American				6.00	3.57	***
2 Bio*Mexican Born				1.46	0.77	
Religion (Mainstream Protestant)						
Catholic				0.43	-2.45	*
Fundamentalist Protestant				0.43	-2.73	**
None				1.03	0.09	
Other Religion				0.65	-1.00	
Frequent Religious Attendance (none or little attendance)				1.89	3.78	***
Father Characteristics						
Employed (not employed)				2.67	3.50	***
At least some college (hs or less)				1.78	2.78	**
Other Children						
Mother's children with other father				1.23	1.13	
Father's children with other mother				0.79	-1.36	
Couple's other children together				1.66	2.92	**
-2 Log Likelihood	1294.3			1158.7		
DF	3			25		

Table 5.4 (continued): Odds Ratios for the Logistic Regression Analysis Modeling the Entry into Marriage 1 Year After Birth of Child

	Model 3			Model 4		
	Odds Ratio	B/s.e.	p	Odds Ratio	B/s.e.	p
Baseline Odds	0.016			0.008		
Race/Ethncity (White)						
Black	0.46	-2.99	**	0.48	-1.43	
Mexican American	0.40	-2.43	*	0.87	-0.22	
Mexican Born	2.09	1.83	^	8.77	3.66	***
Relationship Status at Time 1 (Non Romantic)						
Cohabiting	3.25	3.45	***	7.45	3.74	***
Cohabiting*Black				1.10	0.18	
Cohabiting*Mexican American				0.33	-1.82	^
Cohabiting*Mexican Born				0.09	-3.97	***
Visiting	2.22	2.22	*	2.89	2.67	**
Cohabitation Related Attitudes						
Better for couple to marry than to live together	1.25	1.29		1.25	1.28	
Living together is same as being married	1.10	0.54		1.08	0.46	
Mother Characteristics						
Age	1.01	0.69		1.01	0.55	
Employed (not employed)	1.68	2.32	*	1.69	2.30	*
At least some college (hs or less)	0.95	-0.16		0.97	-0.13	
Lived with 2 biolocal parents (other)	0.55	-1.77	^	0.49	-2.07	*
2 Bio*Black	1.29	0.55		1.42	0.75	
2 Bio*Mexican American	6.75	3.76	***	7.89	4.02	***
2 Bio*Mexican Born	1.52	0.85		2.53	1.79	^
Religion (Mainstream Protestant)						
Catholic	0.43	-2.47	*	0.40	-2.66	**
Fundamentalist Protestant	0.42	-2.72	**	0.37	-3.04	**
None	1.03	0.09		0.91	-0.26	
Other Religion	0.63	-1.05		0.55	-1.33	
Frequent Religious Attendance (none or little attendance)	1.88	3.65	***	1.86	3.54	***
Father Characteristics						
Employed (not employed)	2.46	3.17	**	2.80	3.53	***
At least some college (hs or less)	1.96	3.21	**	2.03	3.37	***
Other Children						
Mother's children with other father	1.24	1.15		1.27	1.27	
Father's children with other mother	0.80	-1.23		0.79	-1.31	
Couple's other children together	1.54	2.43	*	1.71	2.95	**
-2 Log Likelihood	1140.2			1109.7		
DF	29			32		

***p<.001, **p<.01, *p<.05, ^p<.10

Chapter 6: Conclusions

6.1: Introduction

The rise in non-marital fertility over the past several decades has been one of the most important changes in the American family and maintains the attention of academics as well as policy makers and the general public. Of particular importance are the continued (and in some cases growing) race/ethnic differences in non-marital fertility. As reviewed in this dissertation, much research has explored the complex relationship that exists between individual and family level background characteristics, social context and family structure, including non-marital fertility. Yet, research focused overwhelmingly on Black/White differences decreasingly captures the reality of ethnic diversity in the United States. As policy is often guided by theory it is critical to determine whether the theoretical relationships between these factors, often based on Black/White differences, hold up across other minority groups such as Mexican Americans, a large and rapidly growing group that remains largely understudied. Additionally, the inclusion of other disadvantaged minority groups into these analyses allows for richer and more complete theory testing.

This dissertation answered the call for more researchers to study the family formation of Hispanics in general (Moore 2001) and to study these processes of family formation within their broader social context (Small and Newman 2001). The fundamental question of this dissertation focused on why some groups of women, in

particular Mexican American women, are more likely to begin their 'pathway' to family life with a birth rather than with marriage. The analyses presented in Chapters 2-4 used the 1995 NSFG and the NSFG-CDF to explore the relationships between background characteristics, social context, and non-marital fertility among Mexican American women, testing hypotheses drawn primarily from two bodies of research; one that focused on the high levels of non-marital fertility among African American women, and one that focused specifically on 'cultural' characteristics and the unique experience of Mexican Americans. Essentially, these hypotheses were designed to explore whether Mexican American women are affected in similar ways as Black women by their minority status within the United States as well as whether a distinct ethnic heritage and/or ethnic experience independently shapes their family formation.

Chapter 2 looked specifically at the effects of characteristics of women and their family of origin on non-marital fertility. Chapters 3 and 4 looked at the role of community context, operationalized at both the county and census tract level. Lastly, Chapter 5, using data from the Fragile Families and Child Wellbeing Study attempted to look more closely at the meaning of cohabitation paying particular attention to race/ethnic differences in the role of relationship status on the likelihood of marriage. This chapter offered additional insight into the minority status/ethnic heritage question.

The next section discusses the main themes of the dissertation, combining findings from all of the chapters. Specifically, I talk about the role of socioeconomic

status, the role of community context, the role of cohabitation, and what these findings combine to tell us about the effects of minority status and/or ethnic heritage on the family formation of Mexican American women. I then briefly discuss directions future research may take.

6.2: Main Themes

6.2.1 Socioeconomic Status and Non-Marital Fertility

One of the most important findings in this dissertation was that race/ethnic differences in non-marital fertility varied by socioeconomic status. While much attention has been focused on the non-marital fertility of teenagers and lower SES women, in fact, the largest race/ethnic differences (for Black and Mexican American women relative to White women) were among women of higher SES. Interestingly, as seen in Chapter 3, the Mexican American/White difference by socioeconomic status is much more pronounced in more recent periods corroborating other research that finds that Hispanic/White differences in non-marital fertility rates have been increasing over time (South 1999). Whether we look at all years since 1960 or only those since 1985, minority women do not benefit, as measured by non-marital fertility, in the same manner as White women do from gains in socioeconomic status. But this only tells part of the story.

Equally important was the finding that the characteristics which influenced the sequencing of marriage and childbearing for women, and race/ethnic differences in

this sequencing, varied by socioeconomic status. Essentially, by looking at the behavior of higher and lower SES women separately, this dissertation documented a three way interaction between community level and individual level background characteristics (e.g. cohabitation, school enrollment), race/ethnicity, and socioeconomic status on the risk of a non-marital birth. More simply put, there were two separate stories told here, one for women of higher socioeconomic status and one for women of lower socioeconomic status.

While Chapter 2 documented that a woman's schooling and cohabitation status were strongly associated with non-marital fertility for all women, the effect of these variables varied by race/ethnicity among women of lower socioeconomic status. In particular, Mexican American women had much higher fertility within cohabiting unions than Black and White women and being enrolled in school was less of a deterrent to having a non-marital birth for both Mexican American and Black women compared to White women. These effects did not differ by race/ethnicity among women of higher SES.

Chapters 3 and 4 additionally documented that different contextual variables emerged as important for women of higher SES compared to those of lower SES. Controlling for the race/ethnic specific county level unemployment rate and the census tract level neighborhood disadvantage index reduced Mexican American/White differences in non-marital fertility among women of higher SES substantially. However, only the more localized measures, at the census tract, were

important for women of lower SES. And in this case, not only were women of lower SES affected by the neighborhood disadvantage index, but also by the work and schooling behavior of the youth in their neighborhood.

In the next sections I talk more explicitly about the roles of cohabitation and context and how these roles differ by socioeconomic status, however here I would like to emphasize the role of education in shaping the family formation of lower SES women. Minority women of lower SES are doubly disadvantaged, as indicated by non-marital fertility rates. Not only are they disproportionately located in disadvantaged neighborhoods with fewer youth enrolled in school as documented in Chapter 4, thereby increasing the risk of a non-marital birth, they are also less able to benefit from individual investments in education as documented in Chapter 2. I feel this in part reflects the differential educational opportunity for minority women relative to White women. As discussed earlier, ethnographic research has documented an 'oppositional culture' among poor Black and Mexican American youth which tends to devalue 'acting white', including academic achievement (Kaplan 1997; Dietrich 1998; Portes and Rumbaut 2001; Fordham and Ogbu 1986). To borrow from East (1998), the findings in this dissertation suggest that, for whatever reason, lower SES minority women may indeed have a weaker 'school orientation' than lower SES White women.

6.2.2 Instrumental vs. Socialization Mechanisms and Non-Marital Fertility

One of the primary research objectives in this dissertation was to determine which community characteristics contributed to race/ethnic differences in the family formation trajectories of women. Chapters 3 and 4 explored whether a lack of structural opportunities at the county level (instrumental mechanisms) as well as a lack of role models encouraging stable schooling/work and a more 'normative' ordering of family formation behaviors at the census tract (socialization mechanisms) accounted for the relatively higher non-marital fertility of Mexican American women. Additionally, these chapters explored whether contextual factors thought to be particularly relevant to the Mexican American population were important.

The general conclusion is that, yes, context matters and is associated with the relatively high non-marital fertility of Mexican American women. Consistent with previous research focused largely on Black and White women, the instrumental factors were the most strongly associated with family formation. However, these operated at both the county level and the census tract. The most important measures were the economic vitality of a county as measured by the race/ethnic specific unemployment rate and the neighborhood disadvantage index (NDI) measured at the census tract. This finding lends support to the assertion that it is important to take into account multiple social contexts simultaneously (Sampson et al. 2002; Billy et al. 1994). However as touched on above, it also suggests that the relevant contexts, as

well as which aspects of each context are important, varies by individual socioeconomic status.

This variation has implications for Wilson's assertion that poor women will be particularly susceptible to community disadvantage. All women living in neighborhoods with higher levels of disadvantage, as measured by the NDI, had an increased risk of a non-marital birth. As discussed in Chapter 4, this is probably due to structural limitations in those neighborhoods. However, net of this, the non-marital fertility of lower SES women was influenced by other census tract level measures, lending some support to Wilson's assertion. Importantly, it was not that women in neighborhoods with high levels of non-marital fertility or of divorce were more likely to have a non-marital birth; rather it was that women in neighborhoods with fewer men and women maintaining steady employment and staying in school were more likely to choose an alternate route to adult status, childbearing. Thus, as conceptualized in Chapter 4, it was the socialization mechanisms hypothesized to indirectly shape the family formation behavior of women that emerged as important. However, it is important to note that these measures did little to mediate the relationship between NDI and non-marital fertility, suggesting in fact, that these variables are measuring yet another structural component of context, just on a smaller spatial scale. Nonetheless, women of lower SES appear to be particularly susceptible to the characteristics of the census tracts in which they live.

Though women of higher SES women were not as susceptible to the characteristics of their neighborhoods, net of NDI, as were lower SES women, they were affected by structural conditions measured at the broader level of the county, unlike lower SES women. In fact, differences in county level unemployment rates explained a large portion of the race/ethnic difference in non-marital fertility, for Black and Mexican American women. The behavior of higher SES minority women was not really emphasized in Wilson's discussion. However, these findings are in part consistent with research which suggests youth from affluent families may benefit more from living in an affluent neighborhood than less affluent teens (Sucoff and Upchurch 1998). In this case, higher SES women benefit more than lower SES women from living in relatively advantaged counties.

6.2.3 Cohabitation and Non-Marital Fertility

Cohabitation emerged as an important factor in the non-marital fertility of Mexican American women, particularly those of lower SES. In fact, differential fertility within cohabiting unions explained much of the Mexican American/White difference in non-marital fertility in this group of women. It is important to remember that it was only fertility within cohabitation that was more common among Mexican American women relative to White women, not a greater likelihood to cohabit in general. Unanswered is the question of whether the high fertility within cohabitation among Mexican American women is a functional adaptation to a difficult environment or results from an ethnic heritage more supportive of informal unions,

which may in turn weaken with socioeconomic gain. In either case, other research has documented that births to Hispanic cohabitors are 70% more likely to be intended than are births to White cohabitors (Manning 2001), suggesting that these unions with children differ from those for White women.

Though it did not look at women separately by socioeconomic status, Chapter 5 looked more closely at race/ethnic differences in the role and meaning of cohabitation as it related to the likelihood of marriage among a sample unmarried mothers. This chapter confirmed that cohabitation appears to operate somewhat uniquely for Mexican American women. As stated in the discussion of the last chapter, cohabitation plays a larger role for U.S. born Mexican American women and their children than for other groups. A large percentage of births to Mexican American women occur in cohabiting unions (31%), additionally these cohabiting mothers have a lower likelihood of marriage than cohabiting Black and White mothers. While this may reflect that cohabiting unions are more likely to be seen by Mexican American women as surrogate marriages, it also means that children have a much greater risk of spending time in a union that is subject to instability. Even among Hispanics, cohabiting unions are less stable than married unions (Manning, Smock and Majumdar 2002).

6.2.4 Minority Status vs. Ethnic Heritage

The hypotheses presented throughout this dissertation explored whether Mexican American women are affected in similar ways as Black women by their

minority status within the United States as well as whether a distinct ethnic heritage and/or ethnic experience independently shapes the family formation of Mexican American women. I think the answer to these questions, based on the analyses in the previous 4 chapters, is that both are probably important.

Chapter 5 documented that the majority of births to both Black and Mexican American women occurred out-of-wedlock. Chapter 2 documented that lower socioeconomic status among Mexican American women explained part of the difference in non-marital fertility relative to White women, as it did for Black/White differences. So did living in neighborhoods and counties with higher than average levels of disadvantage, as documented in Chapters 3 and 4. But, it is not just differences in distributions across background characteristics (such as socioeconomic status) and geographic location that identify Mexican Americans as a disadvantaged minority group relative to White women; it is also the race/ethnic specific role these variables play. Neither Black nor Mexican American women gained as much protection against a non-marital birth as did White women with gains in socioeconomic status. Additionally, schooling was less of a deterrent against non-marital for both Black and Mexican American women relative to White women, at least among those of lower SES.

In the body of literature which looks at the assimilation of immigrant groups, Portes and Rumbaut (2001), documenting the difficult adaptation process experienced by the Mexican origin population due to discrimination, limited labor market

opportunities, and the development of countercultures among youth, argue that Mexican Americans are the 'classic' example of an ethnic group experiencing downward assimilation, or assimilation towards other disadvantaged groups. The limited upward mobility of Mexican Americans due to racist stereotypes and disproportionate poverty, despite historical depth, has been cited by others as well (Lopez and Stanton-Salazar 2001; Chapa 1988; Murguia 1982). The similarities between Mexican American and Black women in these analyses lend support to this perspective and suggest that the experience and behaviors of the Mexican American population have at least in part been shaped by their minority status in the United States.

However, there are important ways in which the behavior of Mexican American women differs from that of Black and White women. The increased fertility within cohabiting unions may be interpreted as a reflection of Mexican American ethnic heritage; however, as it occurs only among women of lower SES, we can not rule out that it is a unique response to socioeconomic disadvantage that results in conjunction with an ethnic heritage more accepting of informal unions. This is particularly true as Blacks, another disadvantaged minority group, do not seem to respond to disadvantage in the same way. Chapter 5 adds speculative evidence to this interpretation. The interactive effect of cohabitation status on marriage indicate that Mexican American women share some similarities with Mexican born women in that the effect of cohabitation on the likelihood of marriage is substantially less than that

for White and Black women. However, despite this, the behavior and attitudes of Mexican American women generally set them apart from Mexican born women as well. One of the most important points this dissertation reinforces is the need look at U.S. born and Mexican born women separately.[27] While the behavior and attitudes of Mexican American women are likely shaped by their ethnic heritage, there is no doubt that the experience of the U.S. born Mexican origin population within the context of the U.S. distinguishes them from the foreign born in important ways. To combine these two groups makes rather naïve assumptions regarding the role of culture (or a shared ethnic heritage) as well as confuses important indicators of well-being which may be vary substantially depending on nativity status.

Chapters 3 and 4 explored the possibility that a particular ethnic heritage may be affecting the behavior of Mexican American women on a macro scale. It was hypothesized that large ethnic/immigrant populations might encourage lower non-marital fertility, net of other neighborhood characteristics. However, living in neighborhoods and counties with higher proportions of immigrants or Hispanics did not lower the risk of a non-marital birth for Mexican American women, and in fact increased it in certain cases. It may be the case that immigrant concentration is picking up untapped measures of socioeconomic disadvantage. However, it is important to note that these analyses did not look specifically at the interaction between neighborhood disadvantage and immigrant/ethnic concentration. Further

[27] Or at least to distinguish those who grew up in the United States from those who did not.

research may find that immigrant/ethnic concentration emerges as important only among those who live in disadvantaged areas. Denner et al. (2001) found that high poverty zip codes with a higher percentage of Latino residents and stronger social networks had lower Latina adolescent birth rates. They argue that living in ethnically homogenous neighborhoods mean that contact is maximized with other co-ethnic group members who share and support sub-cultural institutions and values, offering protection against community disadvantage. To the extent that this is particularly important in disadvantaged neighborhoods, future work needs to look at the interaction between immigrant concentration and community level disadvantage.

6.3 Future Directions

There is a clear need for more research on each of the issues discussed above: the interaction of race and socioeconomic status on family formation, the role of multiple social contexts on family formation, the role of cohabitation as a unique family form for Mexican Americans, and the role of a particular ethnic heritage and experience within the Unites States on family formation. Additionally, there is a need to better understand how all these issues interact to help shape the life course trajectories of women.

The fact that Mexican American women are disproportionately concentrated in counties and neighborhoods with fewer economic opportunities accounts for some of the race/ethnic differences in non-marital fertility, including Mexican American/White differences. One remaining question that certainly needs to be

explored further is why the family formation of higher SES women is affected by contextual factors at both the county and tract level, while that of lower socioeconomic status women only by more localized tract level factors. There are many reasons this may be the case, but one may have to do with differential access to labor markets. The fact that only higher SES women were influenced by the county level unemployment rate may mean that these women have greater access to these broader labor markets, and to the jobs which may discourage non-marital births. Differential access to these markets may be shaped by differential levels of education and skill sets between lower and higher SES women, however it may also reflect such things as differential access to transportation.

The question remains, what exactly does living in a disadvantaged neighborhood or county mean? It likely reflects much more than a lack of educational and employment opportunities for men and women, and perhaps a normative climate surrounding those behaviors. Sampson et al. (2002) argue that there are four classes of mechanisms that link neighborhoods to individual behavior: institutional resources, norms and collective efficacy, social ties/interaction, and how land use and the ecological distribution of daily activities affect individual well-being. Each of these areas deserves more research as applied to Mexican Americans, and perhaps can offer insight as to why certain levels of context are more important for some groups of women relative to others.

One aspect of social interaction that needs to be looked at more closely is student/teacher interaction. As discussed above, ethnographic work suggests that student/teacher interactions are weak in disadvantaged and racially segregated neighborhoods and that disadvantaged minority students may be held to lower expectations (Kaplan 1997; Dietrich 1998). Dietrich (1998), focusing specifically on Chicana adolescents in a Los Angeles high school, found that schools had few resources and provided few role models of success. Additionally, teachers and school officials generally had low academic expectations of Chicana students. It is important to note that Dietrich (1998) found that the majority of girls were not anti-school or anti-learning, but lived in a context generally discouraging of academic success. It is not just ethnographic work that offers this perspective. A recent CNN report looked at differences between a primarily White school (northern) and a primarily Latino school in the same district in California. This report found that Hispanic parents felt that differences in academic achievement went beyond socioeconomics; they felt that the district did not provide an equal education for their kids compared to White kids and that there were lower expectations for their kids. They argued that "teachers in the north have more experience, schools offers more accelerated or advanced placement classes and the school board is more responsive to northern parents". While some research has suggested that Mexican American girls are being socialized for marriage and childrearing to the exclusion of work-related or school-related roles (East 1998), it is important to understand where this socialization is occurring.

In this dissertation, many of the hypotheses regarding the effects of social context were derived from research that focused on the behavior of poor women in 'underclass' or 'ghetto poor' neighborhoods. While this dissertation did not specifically identify Mexican American women who reside in these extremely poor neighborhoods, Chapters 2, 3 and 4 did look at the non-marital fertility of lower and higher SES women separately, hypothesizing that the factors identified as important from the research on neighborhood effects may be more relevant for women of lower SES. In some cases this was true, but not so in others. There are some benefits to this approach, as it allows us to determine the extent to which all women, including women of higher socioeconomic status, are subject to the effects of the contexts in which they live. However, in order to really understand which mechanisms link context to family formation behavior or which factors help buffer individuals from the negative effects of community disadvantage, it would be beneficial to look at behavior of women within specific types of neighborhoods (segregated, concentrated poor, affluent, etc.). Data sets such as the LAFANS and the Project for Human Development in Chicago neighborhoods, which focus on specific geographic areas and employ better measures of neighborhood boundaries, have the potential to make these types of advances in the study of the Mexican American family.

Determining what factors help women make more successful life course choices, within the context of disadvantage, is critical to the well-being of women and children. Moore (2003) has developed a research agenda that is focused specifically

on how parents and neighborhood adults help shape the behavior of youth in disadvantaged neighborhoods. One of the key areas of research points to contextual differences in the importance of alternative two parent families (such as cohabiting and step family relationships). The argument is that "for adolescents living in socially disorganized communities, the parental figure in step-family or cohabiting households may provide a source of stability, dependability, and comparison that is not present in the majority of peer homes by comparison" (Moore 2003: p. 998). Essentially, those in socially disorganized neighborhoods may actually benefit from these alternate family structures, while those in more socially organized neighborhoods may not. As Moore calls for more work that looks at the importance of other family forms among African American families, this dissertation highlights the need to look at alternate family forms for Mexican American women as well, and in particular cohabitation.

Lastly, more research needs to look at the role of residential segregation and/or ethnic concentration in the lives of Mexican Americans. Though residential segregation among Hispanic groups is less than that experienced by Blacks, it is greater than that experienced by older European immigrant groups (Camarillo and Bonilla 2000), and indices of dissimilarity and isolation in many large Hispanic areas show signs of increasing (Massey 2000). Over this same time there has been an increase in the level of poverty among the Mexican origin population concentrated in counties with large Mexican origin populations (Saenz 1997). Because "processes that concentrate poverty within racially isolated neighborhoods will simultaneously

increase the odds of socioeconomic failure within the segregated group" (Massey 2000: 424), these neighborhoods tend to be characterized by higher levels of unwed parenthood and low educational achievement. In fact, Chapter 4 documented that Mexican American women in neighborhoods with higher levels of immigration (net of neighborhood disadvantage) actually had a greater risk of having a non-marital birth than Mexican American women in neighborhoods with fewer immigrants, though this was not true for neighborhoods with higher levels of Hispanics. Future research needs to look more closely at the interaction between neighborhood socioeconomic status and segregation among Mexican Americans. This will allow a better test of whether ethnic concentration promotes a stronger sense of social cohesion or collective efficacy, which may protect individuals against disadvantage.

References

Abma, Joyce C. and Lauren J. Krivo. 1991. "The Ethnic Context of Mexican American Fertility." *Sociological Perspectives* 34(2): 145-162.

Alba, Richard D. and Victor Nee. 1997. "Rethinking Assimilation Theory for a New Era of Immigration." International Migration Review 31: 826-74.

Allison, Paul. 1984. *Event history analysis: regression for longitudinal event data*. Beverly Hills, CA.

Alvirez, David, Frank D. Bean, and DorieWilliams. 1981. "The Mexican American Family." In Mindel and Habenstein (eds.), *Ethnic Families in America: Patterns and Variations.* New York: Elsevier.

Anderson, Elijah. 1990. *Streetwise: race, class, and change in an urban community*. Chicago: University of Chicago press.

Arias, Elizabeth. 2001. "Change in Nuptiality Patterns Among Cuban Americans: Evidence of Cultural and Structural Assimilation." International Migration Review 35: 525-556.

Astone, Nan Marie and Dawn M. Upchurch. 1994. "Forming a Family, Leaving School Early, and Earning a GED: A Racial and Cohort Comparison." *Journal of Marriage and the Family* 56(3): 759-771.

Axinn, William G. and Arland Thornton. 1992. "The Influence of Parental Resources on the Timing of the Transition to Marriage." *Social Science Research* 21(3): 261-285.

Bachrach, Christine, Michelle Hinding, and Elizabeth Thomson. 2000. "The Changing Shape of Ties That Bind: An Overview and Synthesis." In *The Ties That Bind: Perspectives on Marriage and Cohabitation,* ed. Linda Waite. Hawthorne, NY: Aldine De Gruyer.

Bachu, Amara. 1999. "Trends in Premarital Childbearing." *Current Population Reports.* P23-197. Washington DC: US Department of Commerce.

Baumer, Eric P. and Scott J. South. 2001. "Community Effects on Youth Sexual Activity." *Journal of Marriage and the Family* 63: 540-554.

Bean, Frank D. and Marta Tienda. 1987. *The Hispanic Population of the United States*. New York: Russell Sage.

Bean, Frank D., C. Gray Swicegood, and Ruth Berg. 2000. "Mexican-Origin Fertility: New Patterns and Interpretations." *Social Science Quarterly* 81: 404-420.

Billy, John O.G., Karin L. Brewster, and William R. Grady. 1994. "Contextual Effects on the Sexual Behavior of Adolescent Women." *Journal of Marriage and the Family* 56: 387-404.

Billy, John O.G. and David E. Moore. 1992. "A Multilevel Analysis of Marital and Nonmarital Fertility in the U.S." *Social Forces* 70(4): 977-1011.

Bramlett, M.D., and W.D. Mosher. 2001. *First Marriage Dissolution, Divorce, and Remarriage: United States.* Advance Data Number 323. Center for Disease Control: National Center for Health Statistics.

Brewster, Karin L. 1994a. "Neighborhood Context and the Transition to Sexual Activity among Young Black Women." *Demography* 31(4): 603-614.

Brewster, Karin. 1994b. "Race Differences in Sexual Activity Among Adolescent Women: The Role of Neighborhood Characteristics." *American Sociological Review* 59: 408-424.

Brooks-Gunn, Jeanne, Greg J Duncan, Pamela Kato Klebanov, Naomi Sealand. 1993. "Do Neighborhoods Influence Child and Adolescent Development?" *American Journal of Sociology* 99(2): 353-395.

Brooks-Gunn, Jeanne, Greg J. Duncan, and Lawrence J. Aber. 1997. *Neighborhood poverty: Context and consequences for children.* New York: Russell Sage Foundation.

Brown, Susan. 2001. "Union transitions among cohabitors: the significance of relationship assessments and expectations." *Journal of Marriage and the Family* 62(3): 833-46.

Budig, Michelle J. 2003. "Are Women's Employment and Fertility Histories Interdependent? An Examination of Causal Order Using Event History Analysis." *Social Science Research* 32(3): 376-401.

Bumpass, Larry and Hsien-Hen Lu. 2000. "Trends in Cohabitation and Implications for Children's Family Contexts in the United States." *Population Studies* 54: 29-41.

Butler, Amy C. 2002. "Welfare, Premarital Childbearing, and the Role of Normative Climate: 1968-1994." *Journal of Marriage and the Family* 64(2): 295-313.

Camarillo, Albert M. and Frank Bonilla. 2001. "Hispanics in a Multicultural Society: A New American Dilemma." In Smelser at al. (eds.), *America Becoming: Racial Trends and Their Consequences Vol. 1.* Washington DC: National Academy Press.

Carlson, Marcia, Sara McLanahan, and Paula England. 2004. "Union Formation in Fragile Families." *Demography* 41(2): 237-262.

Castro Martin, Teresa. 2002. "Consensual Unions in Latin America: Persistence of a Dual Nuptiality System." *Journal of Comparative Family Studies* 33(1):22.

Catanzarite, Lisa and Vilma Ortiz. 2002. "Too Few Good Men? Available Partners and Single Motherhood Among Latinas, African Americans, and Whites." *Hispanic Journal of Behavioral Sciences* 24(3): 278-295.

Chapa, Jorge. 1988. "The Question of Mexican American Assimilation: Socioeconomic Parity or Underclass Formation*?" Public Affairs Comment* 35(1). Lyndon B. Johnson School of Public Affairs: The University of Texas at Austin.

Cherlin, Andrew J. 1992. *Marriage, divorce, remarriage.* Cambridge, Mass.: Harvard University Press.

Clarkberg, Marin. 1999. "The price of partnering: The role of economic well-being in young adults' first union experiences." Social Forces, 77, 945-968.

Coverdill, James and Joan Marie Kraft. 1996. "Enrollment, Employment, and the Risk and Resolution of a First Premarital Pregnancy." *Social Science Quarterly* 77(1): 43-59.

DeAnda, Roberto M. 1994. "Unemployment and underemployed among Mexican origin workers." *Hispanic Journal of Behavioral Sciences* 16(2): 163-171.

Del Castillo, Griswold. 1984. *La Familia.* Indiana: University of Notre Dame Press.

Denner, Jill, Douglas Kirby, Karin Coyle, and Claire Brindis. 2001. "The Protective Role of Social Capital and Cultural Norms in Latino Communities: A Study of Adolescent Births." *Hispanic Journal of Behavioral Sciences* 23(1).

Deseran F.A., J.H. Li and R.A. Wojkiewicz. 1991. "Labor Market Performance, Household Structure, and Women's Labor Force Participation." Rural Sociology Research Report 3.

Dietrich, Lisa. 1998. *Chicana Adolescents: Bitches, Ho's, and Schoolgilrs*, Westport, CT: Praeger.

Doty, Michelle M. and Dawn M. Upchurch. 2003. "Within Group Differences in the Timing of First Sex among Hispanic Adolescents: The Role of Acculturation and Neighborhood Social Environments." Paper presented at the annual meeting of the Population Association of America.

Dreier, Peter, John Mollenkopf and Todd Swanstrom. 2001. *Place Matters: Metropolitics for the Twenty-first Century*. Lawrence, Kansas: University Press of Kansas.

Driscoll, Anne K., Gesine K. Hearn, Jeffrey V. Evans, Kristin Moore, Barbara W. Sugland, and Vaughn Call. 1999. "Nonmarital Childbearing among Adult Women*." Journal of Marriage and the Family* 61(1): 178-187.

East, Patricia L. 1998. "Racial and Ethnic Differences in Girls' Sexual, Marital, and Birth Expectations." *Journal of Marriage and the Family* 60(1): 150-162.

Erickson, Pamela. 1998. *Latina Adolescent Childbearing in East Los Angeles.* Austin: University of Texas Press.

Flores, Elena, Stephen L. Eyre and Susan Millstein. 1998. "Sociocultural Beliefs related to Sex among Mexican American Adolescents." *Hispanic Journal of Behavioral Sciences* 20(1): 60-82.

Fordham, Signithia and John U. Ogbu. 1986. "Black Students' School Success: Coping with the Burden of 'Acting White'." *The Urban Review* 18(3): 176-206.

Forste, Renata and Marta Tienda. 1996. "What's Behind Racial and Ethnic Fertility Differentials?" Population and Development Review (22): 109-133.

Fossett, Mark A. and Jill K. Kiecolt. 1991. "A Methodological Review of the Sex Ratio: Alternatives for Comparative Research." *Journal of Marriage and the Family* 53(4): 941-957.

Geronimus, Arline T. 1987. "On Teenage Childbearing and Neonatal Mortality in the United States." *Population and Development Review* 13: 245-27.

Geronimus, Arline T. 1992. "The Weathering Hypothesis and the Health of African American Women and Infants: Evidence and Speculations." *Ethnicity and Disease* 2: 207-221.

Goldscheider, Frances K. and Linda J. Waite. 1986. "Sex Differences in the Entry into Marriage." *American Journal of Sociology* 92(1): 91-109.

Gonzales, Phillip B. 1993. "Historical Poverty, Restructuring Effects, and Integrative Ties: Mexican American Neighborhoods in a Peripheral Sunbelt Economy." In Moore and Pinderhughes (eds.), *In the Barrios: Latinos and the Underclass Debate*. New York. Russell Foundation

Graefe, Deborah Roempke and Daniel T. Lichter. 2002. "Marriage Among Unwed Mothers: Whites, Blacks, and Hispanics Compared." *Perspectives on Sexual and Reproductive Health* 34(6): 286-293.

Grebler, L. J., J. W. Moore, and R. C. Guzman. 1970. The Mexican-American People. New York: The Free Press.

Guendelman, Sylvia, Christina Malin, Barbara Herr-Harthorn, and Patricia Noemi Vargas. 2001. "Orientations to Motherhood and Male Partner support among women in Mexico and Mexican-origin women in the United States." *Social Science & Medicine* 52: 1805-1813.

Hogan, D. P., & Kitagawa, E. M. (1985). "The impact of social status, family structure, and neighborhood on the fertility of Black adolescents." American Journal of Sociology, 19, 825-855.

Hogan, Dennis P. and Nan Marie Astone. 1986. "The Transition to Adulthood." *Annual Review of Sociology* 12: 109-130.

Hunt, Linda M., Suzanne Schneider, and Brendan Comer. 2004. "Should "acculturation" be a variable in health research? A critical review of research on US Hispanics." *Social Science and Medicine* 59(5): 973-986.

Jargowsky, Paul A. 1997. *Poverty and place: ghettos, barrios, and the American city*. New York: Russell Sage Foundation.

Jencks, Christopher. 1992. *Rethinking Social Policy: Race, Poverty, and the Underclass*. Cambridge, Mass: Harvard University Press.

Kaplan, Elaine Bell. 1997. *Not our kind of girl: unraveling the myths of Black teenage motherhood.* Berkeley: University of California Press.

Keefe, Susan E. and Amado M. Padilla. 1987. *Chicano Ethnicity*. Albuquerque: University of New Mexico Press.

Kingsley, G. Thomas and Katheryn L.S. Pettit. 2003. *Concentrated Poverty: A Change in Course.* Washington, D.C.: The Urban Institute. *Neighborhood Change in Urban American.*

Ku, Leighton, Freya L. Sonenstein, and Joseph H. Pleck. 1993. "Neighborhood, Family, and Work: Influences on the Premarital Behaviors of Adolescent Males." *Social Forces* 72(2): 479-503.

Landale, Nancy S. and Daniel T. Lichter. 1997. "Geography and the Etiology of Poverty among Latino Children." *Social Science Quarterly* 78(4): 874-894.

Lehrer, Evelyn. 2000. "Religion as a Determinant of Entry into Cohabitation and Marriage." In Waite et al. (eds.), *Ties that Bind: Perspectives on Marriage and Cohabitation*. Aldine de Gruyter.

Lichter, Daniel T, Felicia B. LeClere, Diane K. McLaughlin. 1991. "Local Marriage Markets and the Marital Behavior of Black and White Women." *The American Journal of Sociology* 96(4): 843-867.

Lichter, Daniel T., Diane K. McLaughlin, George Kephart, and David J. Landry. 1992. "Race and the Retreat from Marriage: A Shortage of Marriageable Men?" *American Sociological Review* 57: 781-799.

Lichter, Daniel and Nancy Landale. 1995. "Parental Work, Family Structure, and Poverty among Latino Children." *Journal of Marriage and the Family* 57: 346-354.

Lopez, David E and Ricardo D. Stanton-Salazar. 2001. "Mexican Americans: A Second Generation at Risk." In Rumbaut and Portes (eds.), *Ethnicities: Children of Immigrants in America*. New York: Russell Sage Foundation.

Luker, Kristin. 1996. *Dubious conceptions : the politics of teenage pregnancy*. Cambridge, Mass: Harvard University Press.

Lundberg, Shelly. 2001. "Nonmarital Fertility: Lessons for Family Economics." In Waite et al. (eds.), *Ties that Bind: Perspectives on Marriage and Cohabitation*. Aldine de Gruyter.

McGinnis, Sandra L. 2003. "Cohabiting, Dating, and Perceived Costs of Marriage: A Model of Marriage Entry." *Journal of Marriage and the Family* 65(1): 105-116.

McLanahan, Sara and Gary Sandefur. 1994. *Growing Up With A Single Parent: What Hurts, What Helps.* Cambridge: Harvard University Press.

McLanahan, Sara and Irwin Garfinkel. 2002. "Unwed Parents: Myths, Realities, and Policymaking." *Focus* 22(1): 93-97.

McLaughlin, Diane K. and Daniel T. Lichter. 1997. "Poverty and the Marital Behavior of Young Women." *Journal of Marriage and the Family* 59(3): 582-594.

McLaughlin, Diane K, Erica L Gardner and Daniel T Lichter. 1999. "Economic Restructuring and Changing Prevalence of Female-Headed Families in America." *Rural Sociology* 64(3): 394-416.

Manning, Wendy D. 1993. "Marriage and Cohabitation Following a Premarital Conception" *Journal of Marriage and the Family* 55: 839-850.

Manning, Wendy D. and Nancy S. Landale. 1996. "Racial and Ethnic Differences in the Role of Cohabitation in Premarital Childbearing." *Journal of Marriage and the Family* 58(1): 63-77.

Manning, Wendy D. 2001. "Childbearing in Cohabiting Unions: Racial and Ethnic Differences." *Family Planning Perspectives* 33(5): 217-223.

Manning, Wendy, Pamela Smock and Debarun Majumdar. 2002. "The Relative Stability of Cohabiting and Marital Unions for Children." Bowling Green State University: Working Paper Series 02-18.

Manning, Wendy D. and Pamela J. Smock. 2002. "First Comes Cohabitation and Then Comes Marriage?" *Journal of Family Issues* 23(8): 1065-1087.

Massey, Douglas S. and Nancy A. Denton. 1993. *American apartheid : segregation and the making of the underclass.* Cambridge, Mass.: Harvard University Press.

Massey, Douglas S. 2001. "Residential Segregation and Neighborhood Conditions in U.S. Metropolitan Areas." In Smelser et al. (eds.), *America Becoming: Racial*

Trends and Their Consequences Vol. 1. Washington DC: National Academy Press.

Miller, Brent C. and Kristin A. Moore. 1990. "Adolescent Sexual Behavior, Pregnancy, and Parenting: Research through the 1980s*." Journal of Marriage and the Family* 52(4): 1025-1044.

Moore Joan and Raquel Pinderhughes, eds. 1993. *In the Barrios: Latinos and the Underclass Debate*. New York. Russell Foundation.

Moore, Joan and James Diego Vigil. 1993. "Barrios in Transition." In Moore and Pinderhughes (eds.), *In the Barrios: Latinos and the Underclass Debate*. New York. Russell Foundation.

Moore, Kristen Anderson. 2001. "Time to Take a Closer Look." *Policy and Practice of Human Services* 59(2): 8-10.

Moore, Mignon R. and P. Lindsay Chase-Lansdale. 2001. "Sexual Intercourse and Pregnancy among African American Girls in High-Poverty Neighborhoods: The Role of Family and Perceived Community Environment." *Journal of Marriage and the Family* 63(4): 1146-1157.

Moore, Mignon R. 2003. "Socially Isolated? How Parents and Neighborhood Adults Influence Youth Behaviour in Disadvantaged Communities." *Ethnic and Racial Studies* 26(6): 988-1005.

Mosher, WD, LP Deang, MD Bramlett. 2003. "Community Environment and Women's Health Outcomes: Contextual Data." National Center for Health Statistics. Vital Health Series Report 23(23).

Murguia, Edward. 1982. *Chicano Intermarriage: A Theoretical and Empirical Study*. Trinity University Press: San Antonio, Texas.

Musick, Kelly Ann. 2000. *Nonmarital childbearing and the changing American family*. Dissertation, The University of Wisconsin, Madison.

Oppenheimer, Valerie K. 1994. "A Theory of Marriage Timing." *The American Journal of Sociology* 94(3): 563-591.

Oppenheimer, Valerie K., Matthijs Kalmijn, and Nelson Lim. 1997. "Men's Career Development and Marriage Timing During a Period of Rising Inequality." *Demography* 34(3): 311-330.

Oropesa, R.S., Daniel T. Lichter, and Robert N. Anderson. 1994. "Marriage Markets and the Paradox of Mexican American Nuptiality." *Journal of Marriage and the Family* 56: 889-907.

Oropesa, R.S. 1996. "Normative Beliefs About marriage and Cohabitation: A Comparison of Non-Latino Whites, Mexican Americans, and Puerto Ricans." *Journal of Marriage and the Family* 58: 49-62.

Oropesa, R.S. and Bridget Gorman. 2000. "Ethnicity, Immigration, and Beliefs about Marriage as a 'Tie that Binds'." In Waite et al. (eds.), *Ties That Bind: Perspectives on Marriage and Cohabitation.* Hawthorne: Aldine de Gruyter.

Osborne, Cynthia. 2004. "Marriage Following the Birth of a Child Among Cohabiting and Visiting Parents." Fragile Families Working Paper 2003-07-FF.

Pagnini, Deanna L and Ronald R. Rindfuss. 1993. "The Divorce of Marriage and Childbearing: Changing Attitudes and Behavior in the United States." *Population and Development Review* 19(2): 331-347.

Parnell, Allan M., Swicegood, Gray, and Gillian Stevens. 1994. "Nonmarital Pregnancies and Marriage in the United States." *Social Forces* 73(1): 263-288.

Phillips Julie A. and Megan M. Sweeney. 2003. "Racial and Ethnic Variation in Marital Disruption: A Comparison of Whites, Blacks, and Mexican Americans." Paper presented at the annual meeting of the Population Association of America, Minneapolis.

Portes, Alejandro and Ruben Rumbaut. 2001. *Legacies : the story of the immigrant second generation*. Berkeley : University of California Press.

Potter FJ et al., National Center for Health Statistics, *Public Use File Documentation, National Survey of Family Growth—Cycle5: 1995. User's Guide*, Hyattsville, MD: U.S. Department of Health and Human Services, 1997.

Powers, Daniel A. 2004. "Effects of family structure on the risk of first premarital birth in the presence of correlated unmeasured family effects." 03-04-04 of the PRC Working Paper Series, The University of Texas at Austin.

Raley, R. Kelly. 2000. "Recent Trends and Differentials in Marriage and Cohabitation: The United States." In Waite et al. (eds.), *Ties that Bind: Perspectives on Marriage and Cohabitation*. Hawthorne: Aldine de Gruyter.

Raley. R. Kelly. 2001. "Increasing Fertility Within Cohabiting Unions: Evidence for the Second Demographic Transition in the United States?" *Demography* 38(1): 59-66.

Raley, R. Kelly and Larry Bumpass. 2003. "The topography of the divorce plateau: Levels and trends in union stability in the United States after 1980." *Demographic Research* 8(8): 246-258.

Raley, R. Kelly and Elizabeth Wildsmith. 2004. "Cohabitation and Children's Family Instability." *Journal of Marriage and the Family* 66: 210-219.

Ramirez, Roberto R. 2000. "The Hispanic Population in The United States: March 1999." U.S. Bureau of the Census, *Current Population Reports*, Series P20-527, U.S. Government Printing Office, Washington, DC.

Raudenbush, Stephen W. and Anthony S.Bryk. 2002. *Hierarchical linear models: applications and data analysis methods.* Thousand Oaks: Sage Publications.

Reichman, Nancy, Julien Teitler, Irwin Garfinkel, and Sara McLanahan. 2001. "The Fragile Families and Child Wellbeing Study: Sample and Design" *Children and Youth Services Review* 23(4/5).

Rindfuss, Ronald R., S. Philip Morgan, and Gray Swicegood. 1988. *First Births in America: Changes in the Timing of Parenthood.* Berkeley: University of California Press.

Rindfuss, Ronald. R. and Audrey VandenHeuvel. 1990. "Cohabitation: Precursor to Marriage or an Alternative to Being Single?" *Population and Development Review* 16:703-26.

Rodriguez, Nestor P. 1993. "Economic Restructuring and Latino Growth in Houston." In Moore and Pinderhughes (eds.), *In the Barrios: Latinos and the Underclass Debate*. New York. Russell Foundation.

Ruggles, Steven. 1997. "The Rise of Divorce and Separation in the United States: 1889-1990." *Demography* 34(4): 455-466.

Rumbaut, Ruben G. 1996. "The Crucible Within: Ethnic Identity, Self-Esteem, and Segmented Assimilation Among Children of Immigrants." In Portes (ed.), *The New Second Generation*. New York: Russell Sage.

Saenz, Rogelio. 1997. "Ethnic Concentration and Chicano Poverty: A Comparative Approach." *Social Science Research* 26: 205-228.

Sampson, Robert J. 1997. “Collective Regulation of Adolescent Misbehavior: Validation Results from Eighty Chicago Neighborhoods.” *Journal of Adolescent Research* 12(2): 227-244.

Sampson, Robert J., Stephen Raudenbush, and Felton Earls. 1997. “Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy.” *Science* 277:918-24.

Sampson, Robert J., Jeffrey D. Morenoff and Thomas Gannon-Rowley. 2002. “Assessing Neighborhood Effects: Social Processes and New Directions in Research.” *Annual Review of Sociology* 28(1): 443-479.

Sassler, Sharon and Robert Schoen. 1999. “The Effect of Attitudes and Economic Activity on Marriage.” *Journal of Marriage and the Family* 61(1): 147-159.

Sigle-Rushton, Wendy and Sara McLanahan. 2002. “The Living Arrangements of New Unmarried Mothers.” *Demography* 39(3): 415-433.

Small, Mario Lewis and Katherine Newman. 2001. “Urban Poverty after The Truly Disadvantaged: The Rediscovery of the Family, the Neighborhood, and Culture.” *Annual Review of Sociology* 27: 23-45.

Smith, Herbert L. and Phillips Cutright. 1988. “Thinking about Change in Illegitimacy Ratios: United States, 1963-1983.” *Demography* 25(2): 235-247.

Smock, Pamela J. 2000. “Cohabitation in the United States: An Appraisal of Research Themes, Findings, and Implications.” *Annual Review of Sociology* 26: 1-20.

Smock, Pamela J. and Wendy D. Manning. 1997. “Cohabiting Partners’ Economic Circumstances and Marriage.” *Demography* 34(3): 331-341.

Snijders, Tom and Roel Bosker. 1999. *Multilevel Analysis: An introduction to basic and advanced multilevel modeling.* London. Sage Publications.

Solis, Patricio. 2004. "Cambios Recientes en la Formacion de Uniones Consensuales en Mexico." Pp. 351-370 in *El Amanecer del Siglo y la Poblacion Mexicana*, edited by F. Lozano. UNAM.

South, Scott J. 1991. “Sociodemographic Differentials in Mate Selection Preferences.” *Journal of Marriage and the Family* 53(4): 928-940.

South, Scott J. 1993. "Racial and Ethnic Differences in the Desire to Marry." *Journal of Marriage and the Family* 55(2): 357-370.

South, Scott J. 1996. "Mate Availability and the Transition to Unwed Motherhood; A Paradox of Population Structure." *Journal of Marriage and the Family* 58: 265-279.

South, Scott. 1999. "Historical Changes and Life Course Variation in the Determinants of Premarital Childbearing." *Journal of Marriage and the Family* 61: 752-763.

South, Scott J. and Kim M. Lloyd. 1992a. "Marriage Markets and Nonmarital Fertility in the United States." *Demography* 29(2): 247-264.

South, Scott J. and Kim M. Lloyd. 1992b. "Marriage Opportunities and Family Formation: Further Implications of Imbalanced Sex Ratios." *Journal of Marriage and the Family* 54(2): 440-451.

South, Scott J. and Kyle D. Crowder. 1999. "Effects of Neighborhood Poverty of Family Formation." *American Sociological Review* 64(1): 113-132.

South, Scott J. and Eric Baumer. 2000. "Deciphering Community and Race Effects on Adolescent Premarital Childbearing." *Social Forces* (78)4:1379-1408.

Stack, Carol B. 1974. *All Our Kin: Strategies for Survival in a Black Community*. New York: Harper and Row, Publishers, Inc.

Stephen, Elizabeth H. and Frank Bean. 1992. "Assimilation, Disruption, and the Fertility of Mexican-Origin Women in the United States." *International Migration Review* 26:67-87.

Stier, Haya and Marta Tienda. 1997. "Spouses or Babies? Race, Poverty and Pathways to Family Formation in Urban America." *Ethnic and Racial Studies* 20(1): 91-122.

Sucoff, Clea and Dawn Upchurch. 1998. "Neighborhood Context and the Risk of Childbearing Among Metropolitan-Area Black Adolescents." *American Sociological Review* 63: 571-585.

Sweet, James. 1981. "Work and Fertility." The University of Wisconsin Center for Demography and Ecology. Working Paper no.81-4.

Teachman, Jay and Kyle Crowder. 2002. "Multilevel Models in Family Research: Some Conceptual and Methodological Issues." *Journal of Marriage & the Family* 64(2): 280-295.

Therrien, Melissa, and Roberto R. Ramirez. 2001. "The Hispanic Population in The United States: March 2000." U.S. Bureau of the Census, *Current Population Reports*, Series P20-527, U.S. Government Printing Office, Washington, DC.

Thornton, Arland, William G. Axinn and Jay D. Teachman. 1995. "The Influence of School Enrollment and Accumulation on Cohabitation and Marriage in Early Adulthood." *American Sociological Review* 60(5): 762-774.

Tienda, Marta. 1991. "Poor People, Poor Places: Deciphering Neighborhood Effects on Poverty Outcomes", in Joan Huber (ed.), *Macro-Micro Linkages in Sociology*. Newbury Park CA: Sage Publications, pp. 244-262.

Tucker, Belinda M. 2000. "Marital Values and Expectations in Context: Results from a 21-City Survey." In Waite et al. (eds.), *Ties that Bind: Perspectives on Marriage and Cohabitation*. Hawthorne: Aldine de Gruyter.

Upchurch, Dawn M., Carol S. Aneshensel, Jyoti Mudgal, and Clea Sucoff McNeely. 2001. "Sociocultural Contexts of Time to Fist Sex Among Hispanic Adolescents." *Journal of Marriage and the Family* 63(4): 1158-1169.

U.S. Bureau of Labor Statistics. 2001. "Annual Average Tables from the January 2001 Issue of Employment and Earnings" ftp://ftp.bls.gov/pub/special.requests/lf/aat6.txt.

Valdez, Avelardo. 1993. "Persistent Poverty, Crime, and Drugs: U.S.-Mexican Border Region." In Moore and Pinderhughes (eds.), *In the Barrios: Latinos and the Underclass Debate*. New York. Russell Foundation.

Van Haitsma, Martha. 1989. "A Contextual Definition of the Underclass." Paper presented at the Midwest Sociological Association Meetings in St. Louis, Missouri, April 5-10, 1989.

Vega, William. 1990. "Hispanic Families in the 1980's: A Decade of Research." *Journal of Marriage and the Family* 52: 1015-1024.

Ventura, Stephanie J., Joyce A. Martin, Sally C. Curtin, TJ Matthews. 1999. Births: Final Data for 1997. *National Vital Statistics Report,* vol 47 no 18. Hyattsville, Maryland: National Center for Health Statistics.

Waller, Maureen and Sara McLanahan. 2004. "'His' and 'Her' Marriage Expectations: Determinants and Consequences." Fragile Families Working Paper 2001-03-FF.

Wilcox, W. Bradford and Nicholas Wolfinger. 2004. "Then Comes Marriage? Religion, Race, and Marriage in Urban America." Fragile Families Working Paper 2002-13-FF.

Wilson, William Julius. 1987. *The Truly Disadvantaged.* Chicago: The University of Chicago Press.

Wilson, William Julius. 1996. *When work disappears: the world of the new urban poor.* New York: Knopf.

Wu, Lawrence L. 1996. "Effects of Family Instability, Income, and Income Instability on the Risk of a Premarital Birth." *American Sociological Review* 61: 386-406.

Wu, Lawrence L. and Barbara Wolfe. 2001. *Out of Wedlock: Causes and Consequences of Nonmarital Fertility.* New York: Russell Sage.

Wu, Lawrence L., Larry L. Bumpass, and Kelly Musick. 2001. "Historical and Life Course Trajectories of Nonmarital Childbearing." In Wu and Wolfe (eds.), *Out of Wedlock: Causes and Consequences of Nonmarital Fertility.* New York: Russell Sage.

Yamaguchi, Kazuo. 1991. *Event History Analysis*. Newbury Park, CA: Sage.

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